



























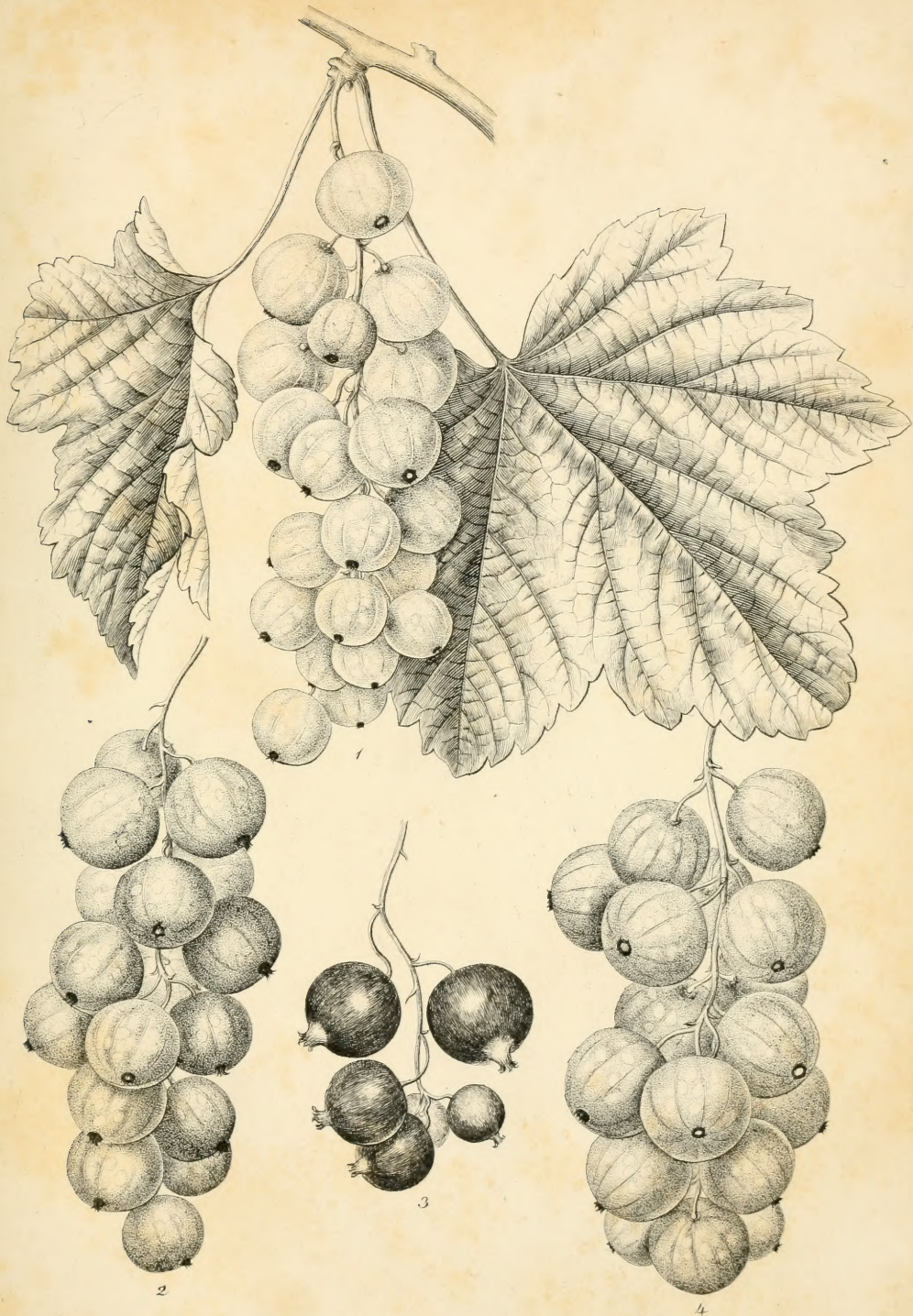


Engraved on Wood, by J. W. Orr, of New-York, Expressly for the Enorkulturist

WINYAH.

THE HANDS OF CO. RICHARD LATHES, NEW BUCKLE, N. Y.





1 White Grape. 2 Prince Albert. 3 Black Naples.  
 4 Cherry Currant.





THE  
HORTICULTURIST,

AND  
JOURNAL OF RURAL ART AND RURAL TASTE.

DEVOTED TO  
HORTICULTURE, LANDSCAPE GARDENING, RURAL ARCHITECTURE, BOTANY, POMOLOGY,  
ENTOMOLOGY, RURAL ECONOMY, ETC.

EDITED BY P. BARRY,  
AUTHOR OF THE "FRUIT GARDEN."

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## The Currant.

WHEN we consider how largely the Currant contributes to good living, in the way of tarts, jams, jellies, wines, &c.; and how easily it is cultivated, how little space it requires, how patient it is under all sorts of maltreatment; we surely must confess that it is a most valuable fruit—an indispensable fruit,—not for the rich man or the poor man, but for every man who has a square yard of ground to till. Valuable as it is, however, it has received comparatively little attention at the hands either of experimental pomologists or practical fruit-growers. While we have had new varieties of other fruits in abundance and to spare, our list of Currants has remained pretty much the same for a great length of time. In cultivation, too, it has been neglected—thrust into some out-of-the-way corner, where other fruits would utterly refuse to thrive, and left to struggle with its fate—it receives no pruning, or pinching, or training, or mulching, such as are lavished on its more favored neighbors.

With all this neglect, it produces crops of fruit, and large crops too; but of what quality?—about as nearly equal to fine, well-grown Currants, as an austere *Crab* is to a delicious *Fall Pippin*, or a common *Damson* Plum to a *Green Gage*. We are quite certain that no other fruit is more susceptible of improvement, by good treatment, than the Currant. Just try the experiment on a neglected bush that has been left to itself for the last three or four years;—apply the pruning knife judiciously, remove all the suckers from about the roots, prune it up to a single stem six or twelve inches from the ground, thin out the top branches, and then give it a liberal dressing of well-decomposed manure, or good compost; and you will be surprised at the size, and beauty, and richness of your Currants. Follow up this mode of treatment for a few years, and you may by that time know what fine Currants are.

Currant bushes, as we too often find them, are complete nuisances—mere thickets of weak branches. An annual pruning is necessary; suckers must by no means be tolerated, and the main branches should be kept at sufficient distance from each other to admit the sun and air freely. The annual shoots should be shortened, in order to keep up a good supply of lateral fruit-spurs. This applies only to the *Red* and *White* varieties; the *Black* bears its best fruit on the previous year's wood. Then it is a great feeder, and must be annually treated to a light dressing of compost. The roots are small and fibrous, and can not travel far in search of food.

By proper management, the season of Currants may be greatly prolonged. For instance; for early ripening, a few plants may be trained against the south side of a garden fence. In this way they will ripen full two weeks sooner than in the open quarter. For late ripening, train on the north side of a fence such late sorts as the *Victoria* and *Prince Albert*. A new French variety, called *La Hative*, is said to be very early, and may on this account prove valuable.

Training the Currant against a wall or fence is a very simple matter. It may be done in this way: Take a young plant—say a year-old cutting—set it in its place,



Fig. 1.

in fig. 2. From each of these we have a certain number of young

shoots, from which we select one or two to train up in a vertical direction, and one to continue the main horizontal branches, as in fig. 3; all others should be rubbed off.

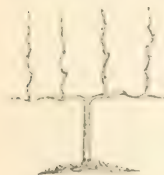


Fig. 3.

The upright shoots should be full six inches apart. At the next pruning, these upright shoots must be shortened one-third or one-fourth, according to the vigor, to insure the production of lateral fruit-spurs; and from year to year this is repeated. It is an exceedingly simple matter, if started on the right principle.

Some people may think that such regularity and precision is altogether unnecessary, and that it will answer every purpose if the branches are allowed their natural growth, and spread out against the fence or wall. The same thing is urged in regard to Grape vines. We must insist upon it, however, that system and regularity are necessary in the training of all trees. Without these we can never secure that nice uniformity of growth and vigor that is absolutely essential to the well-being of all trees placed in artificial conditions.

We are glad to observe increased attention given this useful fruit; in a few years it will no doubt occupy a position in the fruit garden to which it is justly entitled. The production of new varieties should engage the attention of experimental cultivators. We want to increase its size; for this, in small fruits, is an important point. See what the English have done for the Gooseberry; the prize varieties for 1853 are actually as large as pullets' eggs. See what has been done for the Strawberry; RIVERS, in his latest catalogue, says that *Myatt's Eleanor* has been grown, in 1853, eight inches in circumference! This shows what may be done. Among Currants we have received, within a few years, some three or four varieties that show a little advance upon the old popular *Red* and *White Dutch* sorts, so generally grown. The frontispiece of this number exhibits some of these.

The *Cherry* is decidedly the largest red Currant known—at least as far as we are informed. The bunches are shorter than those of the *Red Dutch*, but the berries are at least one-third larger under equal circumstances. The plant is a vigorous grower, having strong, short-jointed shoots, and dark green, heavy foliage, that distinguish it at once from the others.

The *Prince Albert* is a new variety sent us a few years ago from France. The bunches are very long; berries nearly as large as the *Cherry*, of a light pinkish-red color, and ripen quite late. Plant vigorous, with distinct, folded, and sharply serrated foliage. Bears profusely. RIVERS says, in his latest catalogue, that *Prince Albert* is the same as the *Transparent White*. The probability is, that he received his plant



Fig. 2.



from the same source that we did, but got it wrong. It is yet very scarce. It is so remarkable that it can not be confounded with any other sort.

The *White Grape* is the largest and finest of all white Currants. Bunches long, and berries very large and pale. Plant a slow grower, with stout, irregular shoots, and dark green, reflexed leaves. It is called in France *Chasselas*, and in this country has been confounded, to some extent, with the *White Dutch*.

The *Attractor* is a large, white Currant—nearly or quite as large as the *White Grape*. The plant is moderately vigorous, with remarkably deeply lobed, and sharply and deeply serrated foliage.

The *Victoria*, or *Houghton Castle*, is a pale red variety, with bunches of enormous length. Valuable for its lateness.

The *Red Grape*, *Long-bunched Red Dutch*, *Magnum Bonum*, and *Knight's Sweet Red*, are all fine red varieties, superior to the *Red Dutch*; but none of them strikingly distinct.

The *Silver-striped Red* is a variety of the *Red Dutch*, with variegated or blotched foliage, like that of the *Silver-edged Geranium*.

Black Currants, which are largely consumed by the English people for jams and jellies, are not much cultivated in this country. The common *Black English* is well known. The *Black Naples* is larger and finer, and is generally considered the best of this class. We cultivate a curious copper-colored variety of the black Currant. The Missouri Currants are sweet, and have something of the flavor of Whortleberries. The *Large-fruited* has fruit nearly as large as Morrello Cherries, of a shining violet color. The foliage is somewhat of the same character as the *Yellow Flowering Currant*. The *Sweet-fruited* has smaller, oval, shining fruit, of a violet color, and the foliage resembles that of the black Currant more than the others. We have recently received several new varieties from France, which we have not yet tested sufficiently to warrant an opinion of their merits.

## WEeping, OR DROOPING TREES.

THERE is something so attractive and so graceful in the character of drooping trees, that they arrest the attention of persons who would scarcely bestow a glance upon the noblest and rarest trees of the ordinary upright habits of growth which prevail among the mass of forest trees. We see this exemplified daily in our own grounds. A Weeping Willow, common though it be, never fails to elicit admiration. In the hands of a skillful, judicious planter, no other trees are more effective in giving variety, character, and expression, to a landscape; but they must always be used sparingly, and with the exercise of good taste and a great deal of foresight. We have known persons so captivated with the elegance of the Weeping Willow, as to plant half a dozen immediately around their dwellings, stamping them at once with the character of mausoleums, more than that of the habitations of living beings.

It is equally in bad taste to plant largely of trees in which any particular character prevails to a striking degree. At certain points on the Hudson, the tapering *Arbutus* is so thickly planted in some grounds that one can see nothing else. These, the stiffest, most artificial-looking, of all other trees, should be planted with the greatest caution. While two or three might produce a fine effect, entire groves or masses of them become monotonous or disgusting.

It is quite obvious that weeping trees, to produce any effect, must be pretty well isolated; for their streaming side branches are the source of their peculiar grace and elegance. This points out the jutting edges of groups of trees, and the open lawn, as their appropriate situation. The Willows have a particularly fine effect on the margins of streams, ponds, or other bodies of water. Those with stronger branches, such as

the Ash, Elm, &c., are well adapted to forming arbors, and are much employed for this purpose. All the drooping trees are considered appropriate ornaments to cemeteries; the mournful expression which their drooping habit conveys, certainly renders them fitting objects for this purpose.

This class of trees has, within a few years past, received more than ordinary attention; and the consequence is, numerous important additions have been made to the list. Formerly our collection of weeping trees was meagre, extending but little beyond the Weeping Ash, Weeping Willow, and Birch. At present we have five or six varieties of Weeping Ash, several of Willow, beside Weeping Oaks, Elms, Poplars, Mountain Ash, Beech, Larch, Linden, Laburnum, Sophora, Thorns, and many others. Ample material has the landscape gardener here to meet every emergency.

The common *European Weeping Ash* is one of the oldest and most widely disseminated trees



EUROPEAN WEEPING ASH.

of this character. Grafted on a common Ash eight to twelve feet from the ground, it makes a tree of great beauty. The growth is rapid, and it soon forms a large, spreading, drooping, umbrella-like head.

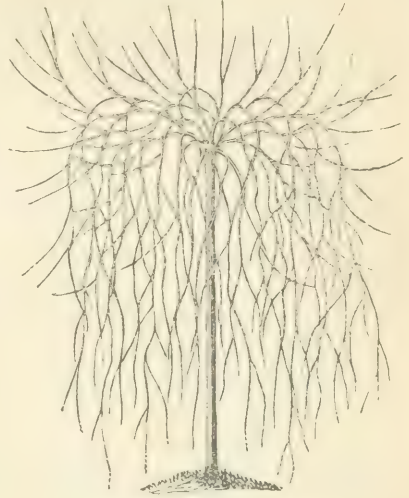
The *Gold-barked Weeping Ash* is a very interesting variety; different from the common sort chiefly in having a yellow bark, which in winter is quite brilliant.

We have obtained here a seedling Black Ash, which promises to be a handsome drooping tree; the branches are exceedingly slender.

The *Lentiscus-leaved Weeping Ash* (*Fraxinus lentiscifolia pendula*) is a fine, spreading, and somewhat drooping tree, well worthy attention; but is inferior, as a weeper, to the others named.

Among those recently brought to notice is the *American Weeping Willow*, from France. It is a trailing species of American Willow grafted on some upright-growing sort. When worked six or eight feet from the ground, it forms one of the most elegant weeping trees we have yet seen. The branches are very slender and numerous, and take a downward direction at once, like the falling spray from a *jet d'eau*. The above is a sketch of a young tree three years from the graft. It is more hardy than the common sort, and being a much smaller tree will be much more appropriate for small lawns and cemetery lots.

The *Weeping Sophora* (*Sophora Japonica pendula*) is a remarkable and elegant tree. Grafted on tall stocks of the *Japan Sophora*, it sends downward a head of long, slender, green shoots, quite ornamental, both in summer and winter. The foliage resembles that of the Laburnum and Locust, to which it is allied. It is quite far enough north here at Rochester, and does



AMERICAN WEEPING WILLOW.



C. FRANKLIN BERG, L.S.

WEEPING SOPHORA.



not succeed so well as it does further south. It is not so extensively propagated in the nurseries as it should be, and is always scarce. It is an exceedingly beautiful tree, and should be planted wherever it will grow well. We shall continue notices of other trees of this character in future numbers.

## A NEW SHADE TREE.

BY THOMAS MEEHAN, GARDENER TO CALEB COPE, PHILADELPHIA.

A CELEBRATED writer has lately issued a work to show who was, or who was not, the writer of the world-famed "*Letters of Junius*;" I wish some one equally anxious to display the acuteness of their logical powers would undertake to show us whether the ancient Job was, or was not, a gardener or arboriculturist. In the absence of all positive proof to the contrary, I venture to offer a presumptive one that he was not: he never could have sustained his patience under the numerous tempting circumstances which crowd on the gardener. Or, had he the heart of an arboriculturist, he could not have stood unmoved when told "that his Elms were smitten with grubs and borers; his Lindens bore wreaths and festoons of insects, and were rotten at the ground; his Ailantus had become the pests of his country; and his Maples the food of drop-worms and aphides." Job *could* not have been a gardener, and it is well he was not, or he would have lost his character and the world its model; and we have gained him as a precedent in the inquiry, "how to stop this plague:" for trees are essential to our existence. If one kind *wont* do, we must find a substitute.

I am going to propose that we introduce a *new shade tree*! Start not, good reader, the "vast and lofty" Himalaya's have not been ransacked to present you with another "curious and rare" specimen of abstract beauty; nor has China or Japan been made to lay before you another object of a nine days wonder. Our subject has no claims of kindred with either the "Tree of Heaven" or the "Deodar;" but is one "to the manor born," in which you all, either by birth or adoption, claim an inheritance. But its country must not depreciate its value. *It is American!* It is *Liquidamber styraciflua*, LIN., better known as the Sweet Gum. But the Sweet Gum I allude to is not the "Sweet Gum" as we find it in densely crowded woods, with its stem as slender and as straight as a stud-sail boom; nor the "Sweet Gum" as we frequently see it in damp, half swampy places, with shoots as weak and delicate as a card-basket osier; but the Sweet Gum sometimes seen growing by itself, unsurrounded by



LIQUIDAMBER STYRACIFLUA.

other trees, and with its roots free to extend themselves unchecked in a cool, deep, and rich loam. In such situations it has not, perhaps, the rural grandeur of the Oak, or the graceful elegance of a Weeping Willow — not, probably, the stiff, majestic foliage of the Magnolias, or the lightness and ease of the “gentle” Birch; but yet a claim to picturesque and simple beauty which no other can eclipse, beside combining many other traits of interest separate in other trees. It is a very rapid grower, will attain a height of eighty feet, and a circumference of seven, under favorable circumstances, and has a widely spreading, roundish, conical head. The branches have a rigid, though much divaricating mode of growth, and are covered with that corky-barked appearance so much sought after and admired in some varieties of Elms, Maples, and Nettle trees. The leaves and fruit resemble the Buttonwood in all except size and hue, and there is, indeed, a sort of distant relationship between the two families. The leaves are not one-third the size of the Buttonwood, deeply lobed — star-like, and produced in abundance. (See annexed figure.) The upper surface shines as if varnished; and as the foliage moves with the slightest summer breezes, gives the tree a playful and pleasing character in its frequent successions of light and shade. This pleasing character of the foliage is heightened at the approach of fall by its brilliant colors. It has no compeer in this character. The leaves change to every describable shade of orange, yellow, and red.



But beautiful as the tree really is, I would not recommend it as a shade tree solely on that account. It abounds with a resinous principle apparently obnoxious to insects. Extended observation has led me to believe that not a species attacks it. This property alone is worth “a plum” to the planter.

Having stated its merits as a faithful historian, I must narrate its short-comings. I do not believe it is adapted to a great diversity of soil, or to a high northern latitude. In poor, dry soils, it is of slow growth and short duration; and it may not probably do well in the dry and confined air of a densely built city; but what does *well* in such extremes?

It is easily propagated. Seed should be sown as soon as ripe, or early in the spring, in a loose, loamy soil, somewhat shaded. Plants will appear in a few weeks in the spring, and grow over a foot the first season. The seed vessels do not ripen till late in the fall, but should be gathered before the first severe frost, which is apt to split open the capsules and suffer the seed to escape.

It is singular that so handsome and useful a tree should be so long neglected; and the only explanation probably is, that it did not come to us with a recommendation from some one of “the ends of the earth.”

[We thank Mr. MEEHAN heartily for refreshing the memory of arboriculturists and landscape gardeners concerning this *beautiful* American tree, the *Liquidamber*.



Some fifteen or sixteen years ago we can recollect there was a very considerable demand for it; but latterly it has been overlooked and neglected, while often trees possessing not a hundredth part of its merits have been planted by the thousand. It is a tree that arrests the attention of even common observers at all seasons,—in summer, its starry, shining, tremulous foliage—in autumn, its gorgeous hues—and in winter, its peculiarly furrowed bark. There is, moreover, but the one species of the genus in North America. According to our experience, the seeds generally lie a year in the ground before growing. LONDON says: “In America, several insects feed upon the leaves, among which we may mention the Green Swallow-tailed Emperor Moth (*Phalaena lana*), and the Great Plane Moth (*P. imperatoria*).” We have no knowledge of this beyond this statement, and we are inclined to think it almost, if not entirely, exempt from the attacks of insects, especially in the Northern States. — Ed.]

## PRUNING AND MANAGEMENT OF THE PEACH TREE.\*

### II. PROPAGATION OF THE PEACH BY BUDDING.

31. It is by budding that the Peach tree is propagated. The proper stocks for it are the Almond, the *Saint Julien* and *Damask* Plums, and the Peach itself. Lately the *Myrobalan* Plum has been budded on, and is said to produce excellent stocks for this purpose, but I have not tried it.

32. The finest trees are produced on the Almond stock, especially on the hard-shelled variety. It succeeds well everywhere except on very wet soils, or those subject to be flooded, because the roots of the Almond almost invariably perish when under water. It has the advantage of late growth; consequently, it is indispensable for the late varieties of Peaches.

33. The Plum is better fitted than the Almond for moist soils. Except in this case, I prefer the Almond stock because it imparts a greater vigor to the tree. This is the opinion of the growers also. Nevertheless the following example does not appear to corroborate this: For ten years I have cultivated a wall covered with a hundred Peach trees, of which fifty were on Almond and fifty on Plum stocks, planted alternately. The soil was very unsuitable for the culture of the Peach, being gravelly, stony, clayey, &c. All the trees have, notwithstanding, grown well; Almond and Plum stocks have made an equal growth, so much so that, even after most scrupulous examination, I have found it impossible to say on which stock the tree succeeded best. The produce from both has also been in every respect equal. I still, however, prefer the Almond stock, although I have given this case as an exception in favor of the Plum.

34. The Peach tree itself is the least employed as a stock on which to bud its different varieties. They grow on it vigorously, but do not fruit so readily. They are also liable to gumming. I have budded the Peach on its own stock, and have been disappointed with the crop of fruit. I have remarked that by budding a second time,

\*Continued from December number.

the growth was moderated, and the crop was abundant. But this proceeding delays production; it must therefore be abandoned for the use of the Almond and Plum stocks. Beside, thus worked, the Peach is but short-lived.

35. If we desire to plant our own Almond stocks, we must choose hard-shelled Almonds, and put them in layers. In the first fortnight of January, we must put in a box or basket, alternately, a bed of sand of the thickness of the hand, and a layer of Almonds until the box be full, or till all the Almonds are used, and place the box or basket in a cellar, or in the earth, so as to be moist and protected from the frost. As soon as there is no fear of frost, that is to say about the end of April, the Almonds are planted in a soil, manured and trenched to the depth of sixteen inches at least. Holes are then made from six to seven inches deep, and about a foot apart, in each of which an Almond is placed, after breaking off about one-third of its tap-root in order to make the roots strike out more horizontally, and to prevent their going down too deep. This process has the advantage of fitting the Almond for those soils which have but a thin layer of vegetable earth. The Almond trees will be ready for budding at the end of August or beginning of September following.

36. If we bud on the Plum, suckers must be procured; these generally spring from the bottoms of large Plum trees. The preference is to be given to the *Black Damask*, which the cultivators near Paris generally get from Fontenay-aux-Roses. These are planted, on a properly prepared soil, from November till March; but November is preferable; they are cut down nearly to the level of the ground, when planted; and they are budded when they have made fresh shoots fit for being worked at the proper season.

37. The ground on which this nursery of Almond or Plum stocks is, ought to be kept perfectly clean. It is necessary to give the ground several stirrings, so that it may be loose and free from weeds.

38. The Plum stock is budded from the middle of July to the middle of August; and the Almond and Peach stocks from the middle of August to the middle of September. The mode employed is almost exclusively that of shield-budding. Care must be taken that the buds are from very healthy trees and from shoots well ripened, and of a slightly abated growth. The stocks which are to be budded must, on the contrary, have their sap in full flow, so that, should the bud not take, the operation can be repeated. On this account the Almond is the most advantageous by reason of its late growth. As soon as the shoots for furnishing buds are cut, the leaves are taken off, allowing a portion of the stalk about one-third of an inch long to remain. The spontaneous fall of this remaining portion of the stalk shows that the bud has taken. Although it is always better to employ the buds as soon as possible after the shoots have been cut off, they may be very well preserved by keeping the bases of the shoots in water. It is even good to adopt the same treatment for buds that have come from a distance.

39. The bud commonly takes in six or twelve days; this is known, as before said, by the fall of the stalk. If, on the contrary, the stalk remains on, and the bud wither up and die, the stock must be re-budded.

40. Stocks can be budded, if planted in the place where the tree is to be formed, quite as well as those in the nursery. The last are always budded with a single eye, the shoot from which is pruned in the following spring. When budded in their position against a wall, a bud can be placed on each side of the stock; this gives two eyes regularly placed for the formation of the two main branches. A year is gained by this, for in the following spring, instead of pruning the shoot from the bud to allow of the growth of the two lower eyes, destined to form the two main branches, these already exist, and can receive their first pruning. But for that to take place, both buds must have taken well, and both must be equally strong. Yet it is true that if one of them die, we find ourselves, by straightening and pruning, in the same position as if we had inserted one bud only.

41. Nurserymen often commit the error of propagating, for too long a time, a variety that they know to be good by taking shoots for the supply of buds from the plants of that sort that were worked the year before. It is better to renew these buds by taking shoots from full-grown trees. This is the reason that I bud myself the stocks which I have chosen in the nurseries; by this I am also more sure of the varieties; I, however, take the precaution of not nailing to the wall some shoots on the upper part of the tree which is to be propagated from, so that the sap may still be in flow at the time of budding. The necessity of having shoots of good growth for this purpose is the reason of nurserymen taking them from the open ground rather than from the walls.

42. By means of budding, several varieties of Peaches can be grown on the same tree. This gives no advantage, except in a case where it is desirable to have, in a short time, a greater variety of fruit than we should otherwise possess. Some buds are worked on the strongest shoots of the middle of the tree. Often these buds make shoots of five feet and more; the eyes burst and form fruit-branches; and sometimes the following year ten or twelve Peaches are gathered from the first shoot of the bud.

43. By the same means it is possible to change the nature of the fruit of a Peach tree. A person had planted double-flowering Peaches; when he saw them his first impulse was to order them to be destroyed. I persuaded him to do nothing of the sort, hoping to make his trees productive in a short time. In the beginning of August, I put ten or twelve buds on each tree, on the young wood as well as on the main branches. The success was complete, and in two years afterward he gathered splendid fruit.

### III. ON PLANTING THE PEACH TREE.

44. A. *On the Choice of Trees for Planting.*—Those who are unable or unwilling to bud their own trees, should be careful properly to select, or cause to be selected, in the nurseries, the sorts budded on the stocks best suited to their soil. As I have already said, the preference is usually given to those budded on Almond stocks, with the previously mentioned exception.

45. After having chosen the sorts we require, we must pick out healthy and vigor-



ous trees, with a clear and lively bark, and with a straight stem, properly furnished with eyes at its base. The size of the tree must not be too much regarded, for there are certain much esteemed kinds, which, though appearing less vigorous, are, notwithstanding, equally advantageous.

46. It is necessary to apply to a nurseryman worthy of confidence, whom we can trust in regard to the taking up of the young trees so as to preserve their roots, this being so important to their success. It is better to pay a trifle more per plant rather than run the risk of having trees with roots cut short and mutilated. We should also take care to have the trees planted as soon as possible after they are taken up; and if they have to come from a distance, it is necessary that they should be well packed, especially the roots, so that they may not be dried by the contact of the air.

47. Before giving the precautions which it is necessary to take in planting, it will be well to point out the aspects most suitable for the Peach. Although those I determine are specially applicable to the climate of Paris, it will be easy to modify them according as the locality may be more to the south or to the north, though the culture of the Peach extends but little to the north of the latitude of the capital. I shall also say a few words respecting the wall against which the Peach is trained, and, after having treated on these two subjects, I will return to the planting.

48. *b. Aspects and Soils most suitable to the Peach.*—The Peach tree equally dislikes an aspect that is too hot or too cold; and, although it may be cultivated against a south, and likewise against a north aspect, it is preferable to plant it against an east or west. In this way, the same wall gives support to trees of which the produce on both sides is nearly equal. This is not the case with walls running east and west; on these the trees facing the south have too much heat, while those on the opposite side scarcely see the sun, and either ripen their fruit badly, or not at all. This consideration has determined the greater part of the inhabitants of Montreuil, Bagnolet, and other places, where the cultivation of the Peach is the principal source of employment, to build their walls to run nearly north and south, in order that the trees planted on the east side may enjoy the influence of the sun from his rising till 1 p. m.; and those on the west for the rest of the day. However, we plant the Peach against aspects less favorable than those just mentioned; for the ground does not always admit of placing the walls so as to afford the aspect we would wish. Walls are occasionally to be seen which do not receive any sun till 10 a. m.; we, however, cover them with Peach trees, which become very fine; but they give great trouble in pruning, because their wood or pushing-eyes are frequently at the ends only of the fruit-branches, which must therefore be preserved entire if we wish to obtain fruit.

49. As regards the nature of the soil, the Peach is not so particular as some imagine. When well managed it grows anywhere, if the soil is only deep enough. Nevertheless its growth is much greater and more regular when planted in a light soil resting on a bottom of silicious pebbles among which the roots of the Almond find their way; it must also be one that does not retain the water so long as to prove hurtful to the roots when the summer is wet.

50. *c. Of Walls and Protection.*—When we have a garden the walls of which

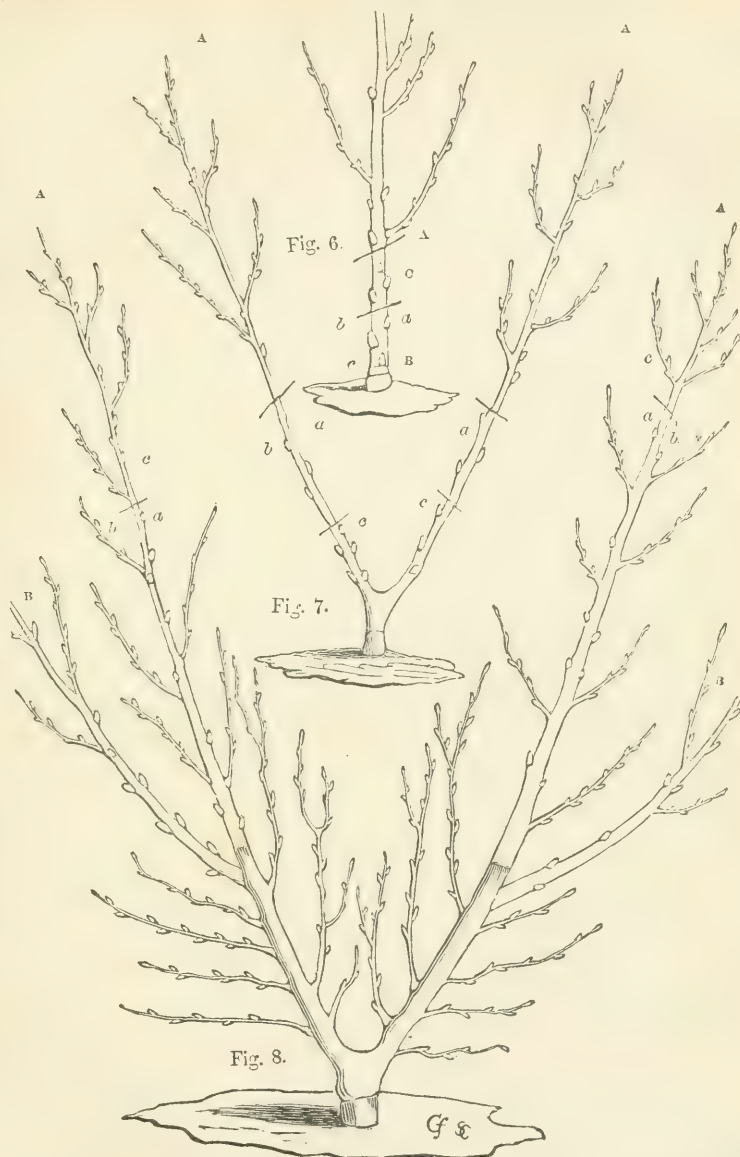
are already built, the aspects that they have must be made the best of. But when a new garden is made, it is well to bear in mind what I have said with regard to aspect, and consequently to lay out the kitchen-garden in the most suitable manner for building walls in the best direction for the trees.

51. When a Peach wall is built at Montreuil, it is  $15\frac{3}{4}$  inches thick at its base, tapering to  $11\frac{3}{4}$  at the top; and about ten feet high. The height is the most convenient for the square mode of training, that which I recommend. There is no objection to the walls being of a greater height. But experience has shown us that the height I have stated is sufficient; and it is prudent not to make an outlay too great in proportion to the produce which may reasonably be expected. The walls should be plastered on both sides an inch and a quarter thick, so as to admit of nails being driven in training. The walls should have a coping, which is made to project  $5\frac{1}{2}$  inches for an east aspect, and  $6\frac{1}{2}$  inches for the others. This projection is calculated for walls of ten feet high; but it should be increased in the same proportion if that height be exceeded. It should also be increased by about two inches in walls having a trellis, in order to compensate for the thickness of the latter and its distance from the wall. Copings have the advantage of moderating the flow of sap in all the points of the branches that are nailed immediately beneath them; of preserving the Peach trees from drip; and of protecting them to a certain extent from spring frosts which cut off the flower, the coping preventing the escape of heat by radiation.

52. As the west and south aspects are those from which the rains are most to be feared, and which are liable to the strongest action of the sun on the shoots and young leaves of the Peach tree affected by hoar frosts, we augment by means of straw mats the good effects which result from the copings. It is for this reason, that beneath the copings of walls with these two aspects we fasten supports in the walls about three feet four inches apart. These supports must be two feet long exclusive of the part fastened in the wall. Straw mats of this width are fastened on these supports, when the state of the weather renders them necessary.

53. In the gardens of private individuals, it is the custom to cover the wall with a trellis of laths, the intervals of which are nine inches and a half by eight inches and a half. This method is advantageous where plaster is scarce, but not so convenient for training as the naked wall. On this account we do not use trellises at Montreuil, although the keeping the walls in repair and the nails and sheels are not less expensive than the trellis. Trellises are also made of iron wire, which answer very well as substitutes for those made of wood; but they require some care to be taken in tying the shoots to them, which will be noticed when treating of that operation.

54. For a new plantation, we lay out a border at the foot of the wall five feet six inches to six feet six inches in breadth according to our space. A good quantity of well-rotted dung is laid on; the ground is trenched to the depth of eighteen inches or two feet, and the soil must be well broken and equally mixed with the dung throughout. Many are in the habit of digging the holes three weeks or a month before planting. I never practise this myself, and I advise no one else to do so. The season for planting is commonly attended with sudden cold rains, which sometimes fill the holes, rendering



the earth so wet and cold as to prove injurious to the roots ; but such is not the case when the holes are made at the time of planting.

55. D. *Planting the Tree.*—Everything being prepared we plant in the course of November. The soil of the border having been newly worked, it is sufficient in good light soils to make holes one foot square [better two feet square] and two feet deep ; but when the soil is of a clayey or damp nature, the holes must be two feet square and



three feet deep, and the earth before being filled in must be rendered light by mixture with good garden mold. This method is to be preferred to that of planting in March, which has the great inconvenience of causing a loss of valuable time to the tree, which, when planted in November, is ready to vegetate the first fine weather in spring; but when planting is deferred till March the vegetation of the tree is often retarded by the drying winds so prevalent at that season. The plants called *eighteen-months* are preferred for planting. They are so called from having been eighteen months budded, or nearly so long. Trees which have been thirty months budded, and which have been cut back upon a lower eye, and of which the roots are much larger and less fibrous than the former, are not so good; still, in some particular cases, they are not to be rejected; for instance, they often take root better in new ground.

56. While the holes are being dug, the roots are trimmed, that is, their bruised extremities are cut with a sharp pruning-knife, and so as that the cut surfaces may rest upon the earth when the tree is planted. At the same time, its head is taken off at from eight to nine inches above the bud to allow of planting it with a sufficient inclination, so that the stem may touch the wall; while the roots are so far from the foot of the latter as not to be cramped in growing by the foundations. See fig. 6, which represents the tree before being planted. It is headed back at the point *a*.

57. The tree is fixed in its place at six and a quarter inches from the wall, and not deeper in the earth than it was before. It is so placed that the eyes *a* and *b* of the bud may be at each side, and not before and behind, without heeding the position of the original bud. It is of little moment whether the latter be turned one way or the other, provided the eyes be properly placed. For the formation of a fine tree in a short time, this precaution is of greater importance than most people suppose. Gardeners usually plant their trees with the budded part in front, without paying the least attention to the position of the eyes. The following spring, when the tree shoots, they are astonished to see the greater number of trees thus planted with eyes before and behind; while those planted as I have directed have their eyes well placed, one on each side. When the tree is in the proper position the roots are carefully spread out, and then covered over to the height I have directed, or at least in such a way that the bud, *b*, may be kept out of the earth.

58. A space of twenty-six feet is left between those Peach trees intended to be trained in the square form. When a Peach and a Pear are to be planted alternately, there should then be a distance of thirty-nine feet between them. The intermediate spaces may be usefully employed by planting between each Peach and Pear tree a young tree, which can be brought up till three years old, and which may be employed to make a fresh plantation, producing a crop in a short time.

(To be continued.)

## REMARKS ON PRUNING.

BY WM. SAUNDERS, GARDENER TO THOS. WINANS, ESQ, BALTIMORE.

NOTWITHSTANDING the amount of attention this operation has received from the earliest to the latest contributions to horticultural literature, there is still much room for improvement in its practical application. It is a matter of regret, and tends greatly to retard horticultural progress, that no definite rules can be laid down for guidance in many of its details, that will be found equally applicable in all cases: hence it occurs that the many seemingly conflicting advices given upon certain subjects bewilders the inexperienced cultivator, and makes him doubt the truth of the sentence that says, "In the multitude of counsellors there is safety." Although theoretical advice will be taken only for what it is worth by the man whose practice is backed by long and successful experience, yet there are many who have not had the benefit of such experience, that are easily led to agree with fair and plausible deductions, and only discover their error when it is too late to be recalled.

In the various manipulations connected with the cultivation of fruit trees, pruning is one of the most important, and one of the least attended to. It is true that most people who have fruit trees generally make some attempt of the kind; but wholesale inflictions of the saw and axe in trimming up the stems, as practised by many, can not be termed pruning. To attain a thorough knowledge both of the use and abuse of the operation, it is necessary to take into consideration the conditions upon which a tree exists, and the modifying influences to which it is subjected. When a seed is deposited in a suitable medium for germination, its first effort is to send roots downward into the soil, which is immediately followed by a corresponding upward elongation forming stem and leaves. The seed contains within itself all the elements required for this process; but as soon as leaves are developed, the plant changes its source of nourishment, and is now dependent upon the soil and air for its future support. The elementary substances absorbed by the roots undergoes decomposition in the leaves, and the new matter thus prepared passes down the stem and roots, extending their formation. The roots have no inherent power of extension, but are dependent upon the elaborating functions of the leaves; and although they precede the leaves in the germination of seed, their existence is due to the previous action of foliage, and their increase will be in an exact ratio to the amount of foliage retained.

When we consider, therefore, how essential foliage is to the health and development of the plant, we may well pause and consider what object is to be gained by infringing upon the beautiful system of reciprocal action Nature has established between the roots and branches, resting assured that every branch we cut off exercises an influence either injurious or beneficial to the future well-being of the tree. This correlative action between the leaves and roots being so intimately connected, it follows that by diminishing the extent of foliage a corresponding check is given to the roots. Their power of action being thus circumscribed, there is less absorption of watery matter into the system of the plant, and the wood is in consequence solidified and well

matured, which is indispensable to a fruiting condition. This effect is produced by pruning when the plant is in full foliage and vigorous growth. If deferred until the leaves perform their allotted functions, a contrary effect is produced. By reducing the branches after the fall of the leaf, the balance of power is destroyed, and the roots have the preponderance: new shoots are then produced with increased size and vigor. Hence it is a well known axiom with successful cultivators that summer pruning weakens, while winter pruning strengthens a plant. The whole art of pruning is comprehended in the proper application of these principles; and when we consider in this connection the innumerable and widely varied causes which render pruning necessary, we will at once see the folly of attempting to establish a definite rule that will be a safe guide to the inexperienced.

In the practical application of the above rules, the pruner must be guided by the condition of the tree to be operated upon. In young trees it is evident that a healthy, vigorous, and extended system of roots is the most important consideration. To secure this, we must carefully preserve every shoot and leaf during summer, and prune it down immediately the season's growth is completed. In an abstract view it does seem a negative practice to allow a branch to grow and then cut it off and throw it away. I confess that, in common with many others, such was at one time my belief, and that something would be gained in establishing the base of a young plant by pinching the ends of strong shoots during summer, with the view of encouraging the production of laterals. After repeated and extended experiment on a variety of young fruit and also ornamental plants, I am convinced that, as a general thing, the practice is decidedly injurious.\* No doubt we can thus *shape* the plant at once, but at the expense of future vigor and permanent health. Secure a healthy root action by winter pruning closely a season or two, and then summer pruning may be resorted to with the best results.

The cultivation of pyramidal Pear trees is at present attracting some notice, and as pruning forms a principal auxiliary in securing any desired form, very much will, of course, depend upon the system pursued. No class of fruit trees present a greater dissimilarity of growth than Pears—consequently the treatment of each variety forms, as it were, a distinct study. Many sorts assume a pyramidal habit almost intuitively, while others require the greatest care to bring them into that form; their treatment must be widely different. Taking the *Winter Nelis* as a familiar example of the latter class, we find a straggly, horizontal growing tendency to counteract. To do this, winter pruning must be vigorously persevered in until the plant sends up vigorous growths. The summer management will then consist in checking the growth of the strongest shoots by pinching their extremities, reserving a considerable portion for winter removal in order to keep up a slight preponderance in favor of root growth. On the other hand may be cited the *Beurre d'Arenberg* and *Glout Morceau* as representatives of a class that naturally form numerous side shoots and laterals. Further than a slight reduction of the first two years' growth these may be kept in the most uniform shape by throwing the knife aside, and skillfully plying the finger

\* We quite agree with Mr. SANDERS on this point, as regards the rearing of trees.—ED.



and thumb occasionally on the young growing shoots. Between these two extreme cases are many intermediate ones. Those having a strong upward tendency of growth, as *Urbaniste*\*, *Duchess d'Angouleme*, *Louise Bonne de Jersey*, *Vicar of Winkfield*, &c., require a different treatment. Lateral growths near the base must be encouraged by severely pinching the strong central shoots, never allowing them to exceed eight or ten inches without bruising the points between the fingers. To preserve the desired shape in these, it will occasionally be found necessary to remove a few of the strongest top shoots altogether during summer, and shorten in the side shoots in the winter pruning. Another distinct and rather unmanageable habit may be exemplified in the rampant growth of *Beurre Diel* and *Triomphe de Jodoigne*. These can only be kept within bounds by persevering in close summer pruning, leaving as little as possible for winter removal—otherwise they will, for many years, produce more fire-wood than fruit.

There is still a large majority that can not properly be classed with either of the foregoing. These may be termed rapid growers, but at the same time easily formed into any desired shape, throwing out numerous side shoots when the tops are pinched. I might notice the *Fondante d'Automne*, *Bonne de Zees*, *Golden Beurre of Bilboa*, many of the *Doyennes*, and a host of others that come under this head, according to my observation of favorably situated trees in this locality. Climate, situation, soil, all exert a manifest influence both in habit and vigor of growth, but the general principles by which we are to be guided remain the same throughout.

It may be supposed that the above remarks have reference merely to training, overlooking its effects as influencing the production of fruit. Such, however, is not the case; in securing the one, we also ensure the other. One prevailing cause of sterility in fruit trees is over-luxuriant growth, and summer pruning is the most effectual check that can be applied, unless we resort to pruning the roots. In fact, it is only by a proper attention to summer disbudding and pinching that the full benefit of good cultivation can be obtained; otherwise it would seem worse than useless to manure and cultivate highly, since it would only encourage excessive wood growth; but summer pruning enables us to derive the full benefit of such generous treatment by the increased quality of superior fruit. By suppressing excess of growth on one portion of the plant the sap is more equally distributed, and fruiting spurs are encouraged on the older branches. The application of stimulants enables the plants to perfect a heavy crop without a weakened reaction, and a yearly succession of good crops becomes a matter of certainty. Summer pinching to promote fruitfulness may be practiced on trees of weakly and delicate growth without materially impairing their vigor. Elongation may be checked by bruising the extreme point of the shoot without any reduction of foliage. Grape vines pruned on the spur system, are frequently injured by the wholesale destruction of foliage after the fruit is formed, instead of attending to it early and checking the shoot as soon as the fruit-stalk could be distinguished. No fruit tree is more benefitted by disbudding and summer pruning than

\* We find the *Urbaniste* one of the most easily managed pyramids, being short jointed and quite branchy from the start.—Ed.

the Peach. Naturally a plant of rapid growth under favorable conditions, it frequently attains an unfruitful luxuriance. Early attention to the removal of superfluous and pinching the points of the strongest shoots, will not only enhance the value of the fruit, but increase the longevity and health of the tree. LINDLEY truly remarks: "If well directed, pruning is one of the most useful, and, if ill directed, it is among the most mischievous operations that can take place upon a plant."

[We commend Mr. SAUNDER'S remarks to the careful perusal and reperusal of all inexperienced persons who are charged with the management of trees. We know Mr. S. to be an intelligent and thoroughly practical man.—ED.]

### CULTURE OF PIE PLANT—RHEUM.

BY WILLIAM BACON, RICHMOND, MASS.

ALL who have had any experience in the matter, are fully convinced of the luxury and healthfulness of fresh and succulent substances for pies at all seasons of the year. Yet the idea has never suggested itself to the many, or if it has it is not practiced upon, that a cycle of such substances may be had so as to furnish fresh material through the year. The Pie-Plant furnishes a beautiful link in this connecting chain, coming, as it does, when Apples begin to lose their freshness, or, as they are in many families, not to be found at all, and before Gooseberries, which have not yet found place in one garden of twenty to any tolerable extent. Yet how few cultivate the Pie-Plant! Why, we know not, for nearly all are fond of it when properly cooked, and it can be raised as easy as the Burdock when once introduced into the soil. Neither of them will grow successfully in poor soils. The Burdock chooses a location for itself, and the Pie-Plant is nearly always thrust into some poor corner of the neglected garden, and then blamed excessively if it will not produce large, fine footstalks where even common weeds would refuse to grow, and where no grass would vegetate, unless it be the ever intrusive Quack. We once planted some miserable, puny roots of the Pie-Plant in a rich, deep soil. The consequence was, the next year the size of the footstalk increased one-half. The following autumn, before the setting in of frost, we covered the bed some three or four inches deep with fresh horse manure. This kept the roots in fine preservation through the winter; and early in spring, when the ground was fairly settled, the manure was mixed with the earth by a deep and thorough forking. No wonder that the vigor of our plants was increased in a wonderful proportion! As soon as any buds appeared they were taken off—the leaves were cut as often as they became large enough for use. The next autumn we gave the usual protection of manure, and the following spring we forked it in. This course we have now followed for four years with some plants we took from neglected grass land. Now mark the result: from the miserable, puny leaves and stalks of the first year's growth, when the stalks were not more than six inches

long and proportionably slender, we have now large, broad leaves, and stalks so strong that all who see them are inquiring where we got our new variety of Plant, so luxuriant, strong, and beautiful. The answer is conclusive: cultivation has done it; and the simple process we have followed, if pursued by others, will, on a small piece of land, and with very little labor, furnish them with an abundance of pie material at the season when, with many, there is the greatest dearth in that article. If gypsum is sown on the young leaves when the dew is on, it will push their growth finely by aiding the manure at the roots in giving them nourishment. We have no doubt but this article can be raised in the way we have adopted, so as to furnish it to cultivators at the rate of enough for a pie for half a penny. What a cheap comfort!

We have somewhere in our travels noticed another error in the cultivation of this plant. It consists in raising it in elevated beds, formed by making a large frame of slabs or boards and filling it with manure and earth, in which the roots are planted. This may give them a *rich* soil, but not a good one—too dry, decidedly. It may answer well in early spring, when rains are frequent and plenty; but as summer approaches, and long, dry, warm days come on, the plants must suffer for want of proper moisture—the leaf-stalk lose its succulence, become stringy, insipid, concoct more of the acid principle, by which it is rendered unpalatable, if not injurious,—and thus its value for half the season be entirely lost; while with a proper locality and care it will furnish a good article, always at hand until September, thus giving a grateful variety to the rich contributions of the summer months.

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## PARK AND BOTANIC GARDEN AT HAMILTON COLLEGE.

BY A. D. G., CLINTON, N. Y.

It may not be uninteresting to you and your readers, to learn that the friends of Hamilton College, at Clinton, N. Y., are now engaged in improving and adorning the grounds which surround the buildings of this institution. Hitherto, only a small yard immediately under the walls has been devoted to ornamental uses. In some parts of this ground the soil has been so poor that grass could make but a feeble growth, and the trees planted in it have either died at once, or have lived a lingering life, mere poles, with small flags of distress flying at their tops. The walks have been simply straight lines, running here and there, and crossing each other at all angles, without any regard to proportion or beauty. Of late, several more acres (fifteen) have been inclosed within the College Park, and the whole has been surrounded with a hedge. The ground has been thoroughly drained, and certain portions of it graded so as to improve the form of its surface. The rectangular walks have been sodded over, and the entire campus has been laid out in walks winding in graceful curves throughout its whole extent. This arrangement of the grounds has been made principally in accordance with a plan drawn up by J. C. HASTINGS, Esq., of this place. Trees, of every description flourishing in this climate, are now being planted, bordering upon



the avenues, or in groups, or as single specimens; and in such connections as, it is hoped, will not offend the eye of cultivated taste. The greater portion of this park will be devoted to grass and trees; but, in appropriate places, shrubs, vines, and flowering plants, will be introduced. A section of the ground will be used as a Botanic Garden, in which trees, shrubs, and flowers, will be arranged according to their several families. The College Cemetery, contiguous to these grounds, will also be laid out in a suitable manner.

Within the area newly enclosed, an Astronomical Observatory is soon to be erected, from whose top the view of the heavens above will be unequalled — unless by the view of the earth beneath.

As soon as the means of the committee having these improvements in charge will allow, it is proposed to ornament the park and garden with vases, sun-dials, arbors, fountains, &c., &c.

These grounds are most favorably situated for the purposes to which they are to be devoted — lying on the brow of a hill sloping gently to the east and south, and commanding a wide view of the Oriskany valley. In this valley, near at hand, lies the village of Clinton. Beyond it, to the right, are several ranges of hills, on which the spires of two other villages are visible. In the distance, to the left, the city of Utica, the valley of the Mohawk, and the Trenton hills, are distinctly seen.

It is no vain thing to suppose that the minds and hearts of students will be benefitted by daily walks through such grounds, and in view of such a varied and wide-spread landscape. These peaceful shades, and sunny slopes, and laughing streams — this hum of cheerful industry — the music of distant church bells, and the glimpses and echoes here caught of the great thoroughfares of business and travel — these skies, ever changing and ever beautiful, and the seasons rolling through them, — what mind can be brought into the midst of such scenes, without deriving from them essential profit?

The public already begin to appreciate the objects of those who are thus endeavoring to render more attractive the surroundings of this seat of learning; and we trust they will do so, more and more. Respecting the "material aid" which the committee need to carry out the project thus set forth, the writer does not wish here to enlarge. He will, however, simply say that such assistance is earnestly desired from the public; and that any one who feels disposed to help us in this enterprise, may remit by mail, directly to Prof. OREN ROOR, Clinton, N. Y., by whom such remittance will be promptly and thankfully acknowledged.

Our present object in writing, however, is not to solicit pecuniary aid, but to speak of this undertaking as an encouraging sign of the times. It is pleasing to notice that a taste is springing up all over the land for an improved style of domestic architecture and of landscape gardening. There is a wide-spread and increasing desire to make the homes of our country more and more attractive. And some of our institutions of learning will, ere long, be as famed for the beautiful scenes amid which they stand, as for the scholarship which fills their chairs of instruction. A teacher in one

of our colleges has happily said: "No seat of learning can be called complete until it furnishes facilities for the study of vegetable growth. \* \* \* \* Philosophy and trees have always been fond of each other's company. Plato's college was a grove of Plantains and Olives. Hamilton is destined—soon, the hope is,—to be so far Plantonized, that its students will be, from day to day, familiar

With arched walks of twilight groves,  
And shadows brown that sylvan loves,  
Of pine or monumental oak,  
Where the rude axe, with heavy stroke,  
Is never heard, the nymphs to daunt,  
Or fright them from their hallowed haunt.'"

[This intelligence is certainly interesting to us, and can not fail to be so to the readers of the *Horticulturist*. Early impressions are the most durable; and as we hope to see the rising generation acquire a love for the beautiful in nature, we should by all means give them early lessons in rural taste—give spacious and beautiful grounds to our colleges and seminaries, and even to our common schools. We are glad to find that the current of public taste begins to run so strong as to exert an influence. Hereafter it will be a great argument in favor of schools and colleges, that the Professors are men of *taste* as well as learning; and that beside tasteful and commodious buildings, there are ample, tasteful, and well-kept grounds, where both mind and body may have healthful and agreeable exercise in the open air. We trust that the modest solicitation of the gentlemen who have charge of the improvements at Hamilton College will not pass unheeded. We shall cheerfully contribute our mite.—Ed.]

## DESIGNS FOR CHEAP COTTAGES.\*

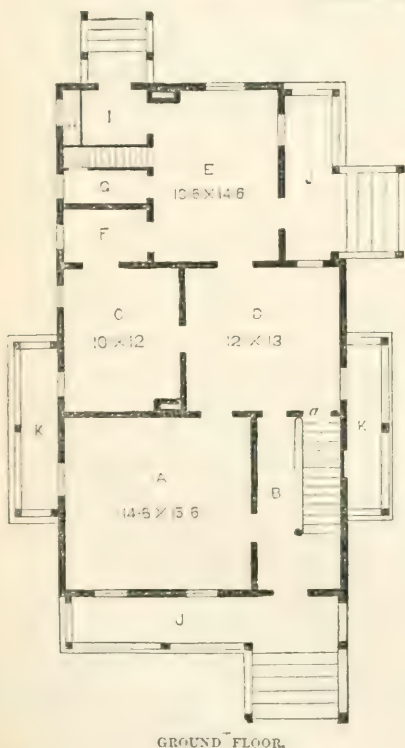
BY MERWIN AUSTIN.

DESIGN FOR A COTTAGE IN THE SWISS STYLE.—This style of architecture is very convenient and suitable for this climate, and about the cheapest kind of building that can be erected. The beauty of this style of architecture is, that while it admits of being constructed on almost any kind of ground, it is particularly adapted to a hilly country, as the more uneven the surface, the more picturesque will the building appear. In some instances, in other styles of architecture, a beautiful front is seen, perhaps crowded with ornaments, and the eye wanders from one object to another seeking a place to rest; but the details are so fine that the eye turns involuntarily away, finding no bold object on which it may rest and contemplate its beauty. The other sides of the same building, perhaps is quite barren and tasteless. This style admits of but

\* This communication and accompanying designs were received from M. AUSTIN, Architect, of Rochester, N. Y. We have made such arrangements as will enable us to pay more attention to Rural Architecture than during the last year, having engaged a well known and competent person to aid us in this department. We have several beautiful designs in course of preparation, one of which we had hoped to receive in season for the January number; but in this we were disappointed. The Swiss cottage, we think, abounds too much in ornament.—Ed.



COTTAGE IN THE SWISS STYLE.



very few carved ornaments, taking its beauty from its picturesque outline, and the bold features which are dispersed throughout the entire construction; thus making a beautiful, and at the same time a cheap building.

The main building is 24 feet front by 25 deep, exclusive of kitchen wing, which is 15 by 19. In these dimensions the different piazzas and balconies are not included. The height of the principal story of the main building is 9 feet between joists; second story, 8 feet; first story of kitchen part, 8 feet. There is also ample room in the chamber story of kitchen, which is divided into bed-rooms for domestics. Under the entire building is a cellar, 7 feet 6 inches high, divided into fuel, vegetable, dairy, larder, and other apartments suitable for a country dwelling.

The building is entered by an easy flight of steps, landing upon the piazza, T, opposite the front door, which opens into the hall, B, off which there is a parlor, A; this

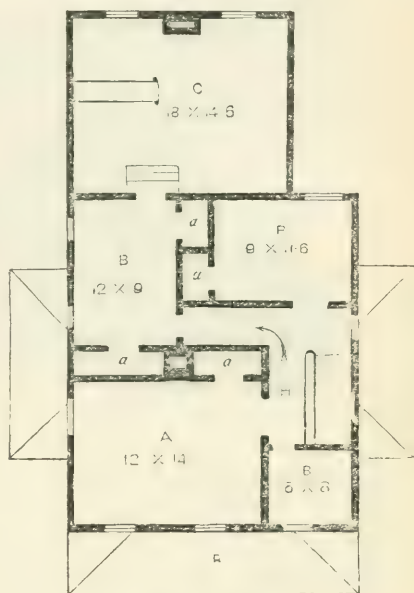


hall also leads into the dining-room, D, attached to which is the nursery, C, having a bathing-room, F. The kitchen, E, is entered from the dining-room, and off which there is a closet, G, and a scullery, I, with sink, H. There is also a back entrance through the scullery to the kitchen. There are two flights of stairs: the main one in hall, B; and the back one, which is entered by means of a door in the closet, G. The back stairs also lead to the cellar, which is shut off by a door at the head of the stairs in the kitchen. Off the dining-room and parlor are balconies, K, which, in summer time, afford a pleasant retreat. These balconies, also piazza, J, are protected from the weather by canopy-heads; the roof of the kitchen wing forms also the roof of the rear side piazza. The second story is ascended by the back and main stairs, the back stairs leading into the servants apartment; by an entrance access is also had into the chamber story of the main part, which is conveniently divided into suitable sleeping rooms, A, B, P, having closets, *a*, attached to each. R shows the roof of the front piazza; on the chamber plan are shown the roofs of side balconies.

*Construction.*—Foundation walls of stone, 16 inches thick, built up even with the principal floor joist. Superstruction to be framed work, 4 by 4 inch studs, and can be covered with weather boards, or ceiled with planed and matched boards; the latter most preferable; the boards to be put on horizontally. The roof is covered with inch boards and shingled; gutters made of tin; the piazzas and balconies supported with brackets. The railings are of  $1\frac{1}{2}$  inch boards, with ornamental work sawed out, the lines running perpendicular. The faceure of the cornices are made of inch boards sawed out, as seen in the plan. The interior finish of the building should be quite plain; doors four panelled, casings about six inches wide, finished with a bevelled band. Plastering, in principal story of the main part, should be three coat work, the remainder two. The estimated cost of the design will not exceed twelve hundred dollars.

It may not be out of place here to mention the necessity of distributing the exterior ornamental work on all sides of the building; and not, as is done in a great many instances, concentrate them to the front exclusively.

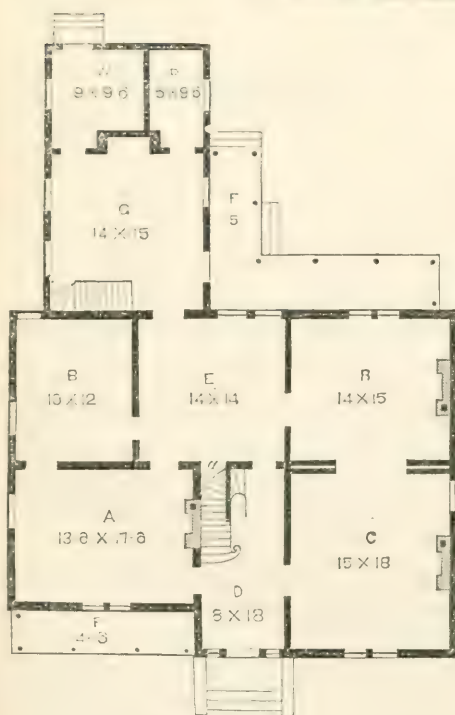
*COTTAGE IN THE RURAL POINTED STYLE.*—This cottage is suitable for a moderate sized farm house, or a residence in the suburbs of a city. Roof projects 3 feet, finished with ornamented verge boards of  $1\frac{1}{2}$  inch plank, and neat verandas with



SECOND FLOOR



COTTAGE IN THE RURAL POINTED STYLE.



GROUND FLOOR.

square columns, and a porch over the front door, supported by brackets.— The frame is of light timber, and covered with planed and matched boards, from 9 to 11 inches wide, put on vertically, and battened over the joints with inch boards  $2\frac{1}{2}$  inches wide. The windows are ornamented with hood mouldings.

The floor plans are arranged as follows: A, living-room, 13 ft. 6 in. by 17 ft. 6 in.; B, bed-room, 12 by 15; E, dining-room, 14 by 14; R, library, 14 by 15; C, parlor, 15 by 18, connected with library by sliding doors; D, hall, 8 by 18; G, kitchen, 14 by 15; W, wash-room, 9 by 9 ft. 6 in.; P, pantry, 5 by 9 ft. 6 in. Principal story, 9 ft. 6 in. between joists; chamber story, 8 ft.

The cost of this design, with cellar under the whole, will not exceed thirteen hundred dollars when completed.

## IMPROVEMENT OF GROUNDS.

BY WM. CHORLTON, GARDENER TO J. C. GREEN, NEW BRIGHTON, STATEN ISLAND.

IN connection with your well-timed and judicious remarks on the "Improvement of Grounds" in the October number of the *Horticulturist*, the preservation of Nature's trees and shrubbery claims our most important attention. The subject requires not my humble pen to depict its great advantages and extol its usefulness, having been often treated of by the most eloquent writers; but as we all labor in one pursuit, even a mite added may be of some service in preventing the wholesale depredation that we so often see going on, the waste of capital, and often vexation when too late to repair the mistake. Ingenuity would be exhausted in discovering a term which should sufficiently express the true meaning of this ignorant demolition.

How often is it the case that, when the site for a house is determined on, the first thing done is to hew down and cut up every living vestige of a tree or shrub on the space to be (as so called) improved. There may be the majestic Oak, Hickory, or Chestnut; and as likely in places where such objects are wanted, there may be beautifully wooded knolls, and shady dells, where the Song Thrush is wont to warble forth his melodious notes; and beneath the bough on which he sits may spring the sparkling Hepatica, the fragrant Violet, the Laurel, the Azalea, and a host of other gems of like character, luxuriating under their accustomed shade, shedding their brilliance, beauty, and perfume around, inviting us to take gratification at no other expense than merely forming paths and removing worthless Cat Briars, Poison Vine, or other such, to give us all that could be required as a pleasant, secluded walk or drive. There may be likewise, a bank of evergreens that by a little care might be improved and reserved as a shelter from cold blasts, or to hide some ugly feature in the back ground, beside the cheeriness given when all other things are leafless and bare. Yet at this point of action all must be leveled—at one fell swoop all must be cut down before the erection of the dwelling-house can be proceeded with. The Song Thrush must be banished—the little flowers and Nature's shrubbery, which before were just where they liked to be, must be leveled: and how all alone and deplorably looking is the most splendid mansion after erection, upon this once well covered eminence, but now a bare hill—or that former sylvan grove, now a vacant slope, where in the present defaced and solitary scene it rears its proud and seedy-looking superstructure. Instead of appearing as a part of a harmonious whole, here alone it stands, a woe-begotten subject, mourning in stiff subjectness to bad taste, and seeming to belong to any thing but the spot upon which it is placed. Sorry is such a scene; and why? Because the ruthless hand of ignorance has irrecoverably destroyed those advantages where Nature has done her utmost to contribute to man's enjoyment.

This is no over-drawn picture, for many a beautiful spot and appropriate feature has been destroyed that might have been preserved, and which it is impossible to create again to equal perfection. Spare, then, the trees; and when the site of a dwelling



house is determined on, remove none but what is absolutely necessary to open out some beautiful object in the distant landscape, or sufficient space for the house. The mind that can appreciate the beauties of Nature may afterward better decide what to remove and which to retain. I would plead, then, for the trees, and the preservation of Nature's flower gardens; for in the most polished surfaces they are often wanted to blend in with the universal harmony of the distant view, to form a connecting link with the immediate precincts; and if it is found to be requisite afterward to remove them, there is no more expense incurred than there would have been had they been taken away at first, with perhaps the advantage of not having to regret for a life time that which can not be replaced.

In all cases before a country residence is proceeded with, some person who can comprehend the beautiful, the grand, and the picturesque, ought to scan over the position, and determine upon the various adaptability of each individual detail, so that nothing be done but what will afterward be an improvement, and give gratification to the proprietor.

It is certainly pleasing to see that, notwithstanding the often misdirected application of operations, there are many proofs existing where the right movement is in action. As we travel along the broad expanse of the majestic Hudson, and view here and there the noble mansions rearing their summits over the surrounding trees, the picturesque and retired country residences, peeping out on the beautifully wooded slopes, the neat cottages, nestled among the umbrageous shade, and the attractive villages, with their back-ground of verdure along its shores, we have ample satisfaction that public taste is now being convinced of the advantages of smoothing down, instead of demolishing, the very many charming spots for man's enjoyment, which Nature has so lavishly bestowed. If we add to this now more generally acknowledged principle a greater number of skilled individuals who are spread over the country, there is better hope for the future, and more certainty that the time is fast approaching when, instead of the many hotch-potch, stiff, and formal apologies mis-called pleasure grounds that at present exist, we shall have an universal scenery of beauty, elegance, and grandeur, that shall outrival all older countries—a unitedness and greatness collectively which, although divided among a number of possessors, will give gratification to the many, and, as a total, will form one great feature in the splendid landscape—will more than equal the greatest individual and ponderous establishment of the aristocratic nobleman of Europe. The splendor, sublimity, and greatness of America's scenery, is by Nature formed exactly to suit these high pretensions. If not destroyed by individual bad taste, there is every opportunity for carrying out so much to be desired a consummation, and nothing to prevent it but an ignorant destruction of some of the finest scenery in the world; and without the protecting influence of a law of primogeniture, we may possess a park-like landscape, equal in finish, and of far greater extent, than Britain itself. May we hope that this progressive and onward movement may rapidly extend until it becomes a general principle, so that our present natural advantages may be retained, and only altered so as to become worthy of, and a part of, that master spirit which governs all other affairs.

## Foreign Notices.

**PLANTING ORCHARDS OF APPLE TREES.**—When an orchard is to be planted, or where there are many rows, the quincunx arrangement is always the best, because by that mode, each tree is equi-distant from its neighbors, and each has an equal portion of air and light; it is also the best for lining in all directions. The rectangular mode of planting (Fig. 2) is only fit for avenues. The quincunx arrangement is based on an equilateral triangle, at each angle of which a tree is planted. To trace out on the ground the lines for the quincunx, which must not be confounded with the rhomb, we first form a base line by means of poles, or with a line; on this line pegs are fixed at the places where we intend to plant, at the distance determined on, say at 42 feet. In order to mark out the second line, we take two measures, each 42 feet long, placing the end of one of them against the first peg in the first line, as at A, and the end of the second against the second peg, B; we then bring the two measures together at the other ends, and a peg is put in at the point where they meet, at C. The three pegs thus form an equilateral triangle. This operation is repeated at the other end of the first line, and the two pegs last put in give the second line, which is then filled up like the first with pegs, 42 feet apart. The whole of the ground being thus marked out, we obtain the result shown in fig. 1. Each tree is equi-distant from the six adjacent trees surrounding it, which can not be the case either in the rectangular or in the oblique square form.

In the quincunx mode of planting, it will sometimes happen that the distance between the rows running parallel to A D is determined; and sometimes the distance of the trees in these rows, as A B is fixed. It is necessary to know, from having one of these distances given, how to find exactly the other. We must repeat the word—exactly; for, supposing the row should contain as many as 50 trees, and the distances A B, or C P, should be only half an inch wrong, some trees, or even rows, would be two feet out of their right position. The trees could easily be placed so as to line in one direction; but this being done, it would be seen that they were, in consequence, put quite as much out of line in another direction. Stake after stake may be altered, to an indefinite period, without forming correct lines, if a wrong principle has been adopted in starting. To prevent such confusion, to save time and expense, and to make sure of staking out the whole satisfactorily, the following will prove very useful.

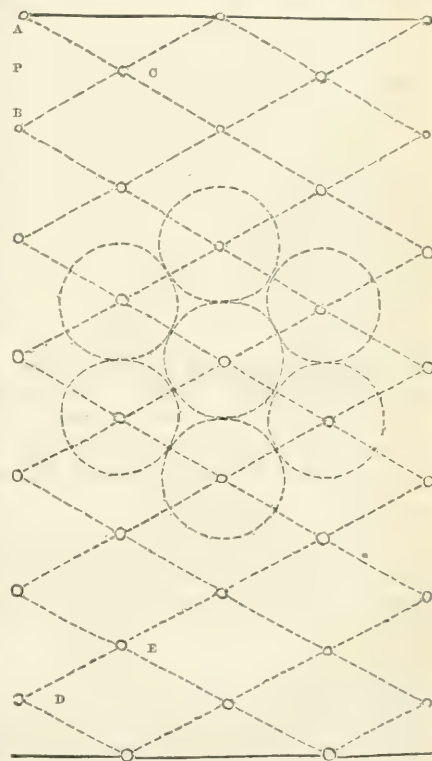


Fig. 1. PLANTATION IN QUINCUNX.

1. The distance  $CP$  between the lines  $AD$ ,  $CE$ , being given to find the distance  $AD$  between the trees in the line  $AD$ .

$$CP^2 = AB^2 - \left(\frac{AB}{2}\right)^2 \quad \text{This reduced becomes } 4CP^2 = 3AB^2$$

Hence the rule; multiply the square of the distance  $CP$  by 4 and divide the product by 3; the quotient is the square of the distance  $AB$ . Or, to the square of  $CP$  add one-third thereof; the sum is the square of  $AB$ .

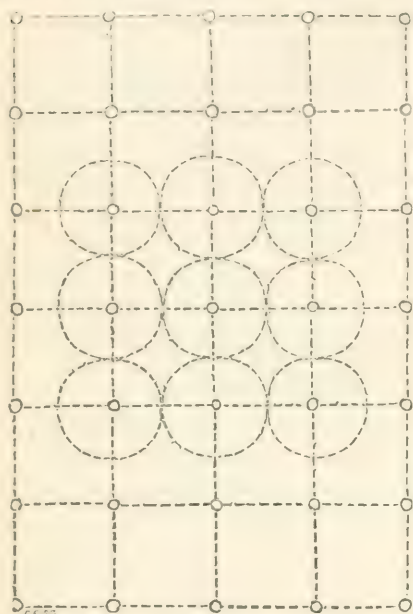


Fig. 2. PLANTATION IN SQUARES.

of the hole, and so as not to interfere with the lines of the plantation; that is to say, the earth should be laid in the four angles formed by the crossing of the two principal lines, and not in the direction of those lines.—*London Gardeners' Chronicle*.

**FLORISTS' FLOWERS.**—As we are drawing near to the close of the floral year, we may turn back at our leisure and review some of the work that has been done in the various departments of floriculture. In what has there been the greatest advance? Fuchsias. Two of the finest dark varieties in cultivation belong to 1853, as it were—Glory, let out by Mr. SMITH, although raised by BANKS; and King Charming, let out by Mr. MAYLE, raised, perhaps, by STOKES. If these be not all we could wish, they are nearer to it than any in cultivation, and must have the leading places in every collection. In the light Fuchsias there has not been so great a movement. The Duchess of Lancaster is the best form, but is deficient in contrast between the sepals and the corolla, which is too pale; but as form is the first property, we must give the Duchess the lead. Then we have England's Glory (Harrison), Lady Franklin (Smith), Incomparable (Mayle), and Beauty (Smith), all different, but beautiful corollas; and the only fault is, they do not reflex enough. England's Glory, perhaps, reflexes most, but we have not satisfied ourselves with the growth yet; and as this makes great difference in the reflexing qualities, we must decide hastily but certainly. The pale ones do not come up to the reds. MOORE & SON, of Birmingham, have advertised one, the Duke of Wellington, a red variety raised by STOKES, and it is in form per-

2. The distance of the trees in the line  $AD$  being given to find the perpendicular distance  $CP$  between the lines  $AD$ ,  $CE$ —

Multiply the square of  $AB$  by 3, and divide the product by 4; the quotient is the square of  $CP$ . Or, from the square of  $AB$  subtract one-fourth thereof, the remainder is the square of  $CP$ .

It will be readily observed from the annexed diagram, that in square planting, a tree neither is nor possibly can be at an equal distance from all those which surround it; and that when four trees grow till their branches cross each other on four opposite points, there is at the same time a large space left elsewhere unoccupied between these trees.

To mark out the holes, we take a piece of cord, at one end of which we make a loop which is put on a peg where a tree is to be planted, and then fastening a pointed peg on the other end of the line, at the distance of the semi-diameter of the hole, we trace a circle with the pointed peg, which circle is the circumference of the hole. It is advantageous to make the holes some time before planting, and to leave them open, so that the earth may benefit by the action of the air. This operation should always be performed in dry weather; each kind of earth should be laid in a separate heap at the side



feetly unique; but there is not sufficient contrast between the sepals and the corolla, which is not dark enough; but the reflexing is perfect, the points literally curling over and touching the stem. In fact, we are progressing in Fuchsias more than in any other flower. *Sedonia*, our favorite of two years' ago, has, however, not been put back by anything. It is still like nothing but itself—beautiful and novel in color, graceful in form, abundant in flower; it is capable of being grown into the most elegant specimen, and there is scarcely a flowering plant of any description that can vie with it. In *Hollyhocks* but little has been added to the noble varieties we already possess. Numerous seedlings have been produced, said to be improvements on others, and named accordingly; but we have not seen the "improvement." There may have been a shade of difference in color, but there have been the broad, flimsy guard petals much too conspicuous, the thin watery colors, the loose florets, and other drawbacks on several that have nevertheless been "certified;" and people weak enough to attend to certificates will buy. In *Pansies* the progress is slow if we take the stands of flowers exhibited as the guide. There is nothing in them more brilliant nor more effective than there was two or three years since; a few new ones that will be out soon may help a little. *Pinks* have made a great start, not publicly, but in raisers' hands; we have seen scores of good varieties in seedling *Pink* beds equal to anything we see exhibited, and in greater variety; indeed, we think any one of two or three raisers we know could turn out a good dozen. Presently we shall see whole batches advertised, and if not too dear they will sell. *Pinks* have always exhibited to indifferent judges a great sameness, and any new and good variety will be eagerly bought. In *Tulips*, every year adds something to our stock; but sameness is the bane of the *Tulip*. In the country they have some novelties; but they are of the same character as old ones, different in their faults and beauties, but not striking. One has a shorter cup than this, and another is not so flimsy as that, but the only things really novel, that we have seen, are the seedlings at Mr. GOLDHAM'S. These we saw of different ground-colors, and with fine changes in the style. Mr. SLATER, too, of Manchester, has some fine seedlings, but they are improvements upon old sorts rather than distinct novelties: very desirable, but not such a move as we want to see. *Pelargoniums* generally produce annually a score or two of new names, and some of them are pretty, but the difference in general is so little that one might fairly wait till they are out and grown by others, instead of buying all, and finding in the majority scarcely a change from what we have got. A new style altogether is found in *Lady Paxton*, which is in most respects like the several white flowers with crimson or dark top petals, but the novelty is in this: there are three striking spots on the lower petals; which peculiarity, beside the beauty of it, takes it out of all the classes we have. Nonsuch, and one or two others of the dark sort, have spots on the lower petals, but there is no white ground variety among all we have seen that has spots, unless we go to the fancy bedding sorts, so that this may be called a move. Mr. DONSON has, doubtless, some novelties among the seedlings raised at Mr. BECK'S; but we have not seen all of them. There will also be the usual batches of sorts too good to throw away, but too bad to be sold at high prices. *Dahlias* have done something. There will be half a dozen first-class flowers come out, a dozen second-class, and perhaps the usual number of third-class. The second-class flowers being about as good as Societies call first-class—that is to say, flowers that will come respectable mostly, and sometimes excellent, but which are only presumed improvements on old sorts, or, if novel, have some prevailing fault. We have seen two flowers of KEYNES'S, of Salisbury, perfect gems, *Fanny Keynes* and *Richard Rawlings*. A blush white, called *Mrs. Rawlings*, very fine; *Champion*, an orange, of *Whale's*, very noble and good; *Golden Eagle*, in the same class, good. But the *King of the Yellows* is the flower of the season, because it has been often shown and never once shown badly; it has been first-rate all through, and twice we have seen it faultless. Then we have a curious and not badly-formed flower, called *Ariel*, white edged; not abrupt, but the rose color of the ground softens off to a white. Other flowers worth notice are, *John Keynes*, *Margaret*, *Primrose Perfection*, *Beauty of Slough*, *Captain Trotter*, *Earl of Shaftsbury*, and *Lord Dungannon*, all seen good, but with some slight drawback. *Prince Alfred*, or *Arthur*, we forget which, has been shown a very bright and good; and *Berbury's Kate*, which should have come out last year, is, we understand, to come out in May. This was shown good last year. In fancy flowers, there is one called *Marvel*, a carnation stripe, beating all in that class at present; *Admiration*, the brightest of the red and white fancies; and *Sardanapalus*, a

very dark, well-defined fancy, after Moree and Gasparine. There are other flowers that we may think of hereafter, but the general character of the lot is good ordinary varieties, as times go, but nothing to stand out in relief. However, we have "run the length of our tether," and must halt for the present. We may resume this, for we have not above half done what we intended.—*Gardeners' and Farmers' Journal*.

THE USE OF FRUIT.—Because bowel complaints usually prevail most during the hot season of the year—the latter end of summer and autumn, when fruit is most abundant, and in tropical climates where fruits are met with in greatest variety—it is inferred, according to the *post hoc propter hoc* mode of reasoning, that the one is the consequence of the other. It were about as reasonable to attribute the occasional occurrences of sea-scurvy in the navy to the use of Lemon juice, Lime juice, or potatoes. These articles of diet are powerfully anti-scorbutic, and so are ripe fruits anti-bilious; and diarrhoea, dysentery, and cholera are complaints in which acrid and alkaline biliary secretions are prominent conditions. I have seen many cases of dysentery, obstinate diarrhoea, and liver disease in people who have been long resident in tropical climates, and, from the history which I have been able to obtain respecting their habits of diet, I have come to the conclusion that these diseases were induced and aggravated, not by the light vegetable and fruit diet most in use among the natives, but because Englishmen usually carry out with them their European modes of living. They take large quantities of nitrogenous and carbonaceous food, in the shape of meat and wines or spirits, rather than the light native food, as rice and juicy fruits, and the vegetable stimulants and condiments, the native peppers and spices so abundantly provided by Nature. It is well known that, though large quantities of animal oils and fats, wines, spirits, and malt liquor, which contain a large amount of carbon, may be consumed with comparative impunity in cold climates and in winter, when the carbonaceous matter gets burnt off by the more active exercise and respiration; in hot climates and in summer this element gets retained in the liver, and ultimately gives rise to congestion of that organ and its consequences—diarrhoea, dysentery, and bilious disorders. Though in extensive practice for fifteen years, in a district abounding with orchards and gardens, I can not remember an instance in which I could distinctly trace any very serious disorder to fruit as a cause; though one might reasonably expect some mischief from the amount of unripe and acid trash often consumed by the children of the poor. I would not be supposed to advocate either immoderate quantities of the most wholesome fruit, or the indiscriminate use of unripe or ill preserved fruits. But I do contend, as the result of my own experience, that not only is a moderate quantity of well ripened or well preserved fruit harmless, but that it is highly conducive to the health of people, and especially of children, and that it tends to prevent bilious diarrhoea and cholera. I am inclined to view the abundant supply of fruit in hot climates, and during the summer and autumn, and the great longing of people, especially of children (in whom the biliary functions are very active), for fruit, to a wise provision of an over-ruling and ever-watchful Providence, which generally plants the remedy side by side with the disease, at a time when the biliary system is in most danger of becoming disordered. I have generally observed that children who are strictly, and I think injudiciously, debarred the use of fruit, have tender bowels, and I have noticed that they are almost universally pallid; while, on the other hand, children who are allowed a moderate daily proportion of sound fruit are usually florid, especially among the poor. I therefore imagine that the use of fruit facilitates the introduction of iron, the coloring principle of the blood, into the circulating system. When living in the country, with the advantages of a large garden and plenty of fruit, I always allow my children a liberal proportion, and never had occasion to treat them either for diarrhoea or skin eruptions, though it is a very common opinion that cutaneous diseases are often brought on by the too free use of fruit. On first removing my family to town, the usual supply being cut off, two or three of the younger ones became affected with obstinate diarrhoea and dysentery, which resisted all the ordinary modes of medicinal treatment. My opinion on the subject afterward induced me to give them a good proportion of fruit every day, as Grapes, Oranges, ripe Apples, &c., when all the symptoms presently subsided, and they have never since been troubled either with bowel complaints or skin eruptions to any noticeable extent. The editor of the *Lancet*, in



animadverting on the "health of London during the week ending August 20," makes the following remarks: "The deaths ascribed to diarrhoea are 126, of which 115 occurred among children. The tender age of nearly all the sufferers, 97 of them not having completed their first year, is sufficient to dispel the popular error that the use of fruit is the exciting cause." Several years ago a serious and very fatal epidemic, then called "English cholera," prevailed in the neighborhood where I was living. It chiefly attacked very young children and old people, and was almost as rapid in its progress as the Asiatic form. This epidemic occurred in the autumn, and many people, influenced by the common prejudice, dug holes in their gardens and buried all their fruit, and some even went so far as to destroy their trees. I made many inquiries as to the previous habits of the victims of this epidemic, and in almost every case I learned that fruit had not for some time previously formed any part of their diet. One writer in the *Lancet* has strongly recommended the use of baked fruit as a preventive of cholera, and another has strenuously advocated the administration of diluted sulphuric acid during the actual attack, and the proofs brought forward of their good effects correspond with my own experience. It is asserted that the cholera has never yet prevailed in the cider counties, nor in Birmingham, where acidulated treacle beer and sulphuric acid lemonade are freely used to obviate the poisonous effects of white-lead in the manufactories.—*M. D., in London Times.*

**CULTIVATION OF THE APHELANDRA.**—All who are in the habit of growing stove plants can not fail to acknowledge the great beauty, as well as utility, of this genus, flowering as they do in the depth of winter, when a great scarcity generally prevails, and recourse must be had to forcing to procure a supply of flowers for decorative purposes. *Aphelandra cristata* is so well known that no remarks are necessary with regard to it. There is, however, another species which is not so well known, from being more recently introduced; I refer to *A. aurantiaca*, a species with splendid scarlet orange colored flowers, and which also possesses the property of flowering when extremely small—it has been flowered when scarcely six inches in height. The *Aphelandra* can be propagated by cuttings, which may be struck in a moist heat. They should be shifted, as they may require it. The best soil for them is loam, leaf-mold, or well rotted cow dung and peat, with a small portion of sand. They must be kept in a moist stove, and plentifully supplied with water during the summer. If judiciously treated, they will flower in December and January. As soon as they have done flowering, the shoots should be reduced to within two or three eyes of the joint from which they started, and the plants dried off and nested, during which time scarcely any moisture is necessary. As soon as they begin to show signs of growth, they must be shaken out of the old soil, and the roots reduced. They should then be re-potted in fresh soil, in pots about a size or two smaller than those they have been taken out of, and shifted, as they may require it, until they are finally placed in the pots in which they are to bloom. Judicious drainage is necessary; and frequent applications of the syringe will be found not only to improve the health of the plant, but also be of material service in checking the increase of insects, this genus being particularly liable to be attacked by the mealy bug and red spider.—*W. H., in Gardeners' and Farmers' Journal.*

**CUTHILL'S BLACK PRINCE STRAWBERRY.**—On the 17th of May last you inserted a few practical remarks I wrote regarding the value of this Strawberry as a good sort for forcing, as well as being a most abundant bearer and of good flavor. I am very anxious to make a few more remarks, feeling convinced they will prove acceptable to those who are interested on this point. After gathering a very good crop from the plants I forced in the spring, I turned them into the open ground; they went on well, and at the beginning of September most of the plants bloomed freely, and on Friday, the 30th September, I put on my employer's table a "large" dish of Strawberries, similar in size, color, and almost equal in "flavor" to those I gathered in the early part of the season. There is at this moment abundance of blossom, fruit ripe and ripening; but as we have had a few frosty nights, I have now placed glasses over the plants, and have no doubt I shall gather several more dishes before the end of October.—*Thos. Webb, in London Gardeners' Chronicle.*



**CULTURE OF GLOXINIAS.**—By this time the greater part of Gloxinias will be going to rest, and thus little remains to be done in their cultivation this year. The object of the grower will now be to pay such attention as their dormant state requires. It is not at all conducive to the future welfare of the plants to allow them to get into such a dry state as to induce the bulbs to shrivel, for it often causes many of them to decay at the time when they should be excited in spring. During rest, too much care can not be taken to prevent the access of frost to the bulbs; they are very sensitive of its influence, showing the sad effect of it upon them when they are again to be brought into active vegetation; for if the least degree of frost have reached them, many will be entirely killed, and should any of them escape destruction, they will flower in a very weak, unhealthy state, and probably die during summer. In fact, they never ought to be exposed to a temperature under 40° Fahr. The back shelf of a stove is an excellent dormitory for them; but where that cannot be had, a warm dry press in a dwelling house will be found a good place to store them away during winter. Having got them safely through their season of rest, then active cultivation may commence, and where a succession of these beautiful and elegant flowers is required, they may be excited into growth at different periods, beginning about the first week of February. They are of the easiest culture, and within the reach of any person wishing to have such lovely additions to their summer flowers. Indeed, considering their easy management, it seems strange that plants possessing, as they do, such attractions are not greater favorites; as no class of plants can be more useful, during the long period in which they remain in perfection, for the decoration of the stove, the green-house, the drawing-room, and they are even well suited for window culture. In starting the Gloxinia into new life in the spring, the pots containing the bulbs are to be taken from their winter quarters, and placed in bottom-heat of between 60° and 70°. The stove, a warm pit, and where these can not be had, a common hot-bed under frames will suit them very well; and so extensively might these beautiful flowers be cultivated, that even the cottager, with his frame heated with any fermenting material, could command a fine bloom of the Gloxinia. When in flower the plants must be shaded from the mid-day sun, and, if possible, bees must be carefully excluded from them, as they seem particularly fond of their beautiful bells, and in their search for honey scratching the soft delicate epidermis of the flower, and scattering it all over with the white pollen it contains; thus tarnishing the color, and depriving the bloom of that freshness which all flowers when grown in perfection ought to have. When the season of flowering is past, the plants must be gradually dried off, and then be returned to their winter quarters. The increase of this lovely tribe is of the easiest management, as a single leaf, with or without a bud at its base, cuttings of shoots, or detached offsets from the bulb, stuck firmly into damp sand, and placed under a hand-glass in bottom-heat, will root in a short time; and where a larger increase is required, a leaf cut into many portions, and treated as above mentioned, will produce plants, but the most interesting way of obtaining plants is from hybridized seed, which, if sown in early spring, will give an abundant crop, most of them flowering the same summer, and as their opening blooms expand it will be most interesting to watch the many hues of colors the seedlings will display.—*Scottish Florist*.

**SULPHUR VS. VINE MILDEW.**—As it appears that mildew on Grapes is still spreading through the country, I am anxious to bear testimony to the efficacy of sulphur as a preventive, and also a cure for this very troublesome disease. Last year it made its appearance here, for the first time, and, being quite unexpected, made some progress before it was perceived; after, however, a good deal of trouble and anxiety, I succeeded, principally by dusting, in saving the greater part of the crop. This year, however, as a preventive, I syringed all my vines, just previous to their expanding their bloom, twice over with a strong mixture of sulphur and water, and with the exception of two or three bunches, all my Grapes have been entirely free from its attacks during the season. The following facts are therefore, I consider, fully established: 1. That sulphur is a certain remedy for mildew after it has made its appearance, but that there is considerable trouble in its application. 2. That it is a sure preventive, with but little trouble, provided it is applied with the syringe, previous to the blooming season. 3. That little or no injury is caused to the vines by its application when mixed in water.—*A. Saul, in London Gardeners' Chronicle*.

## Editor's Table.

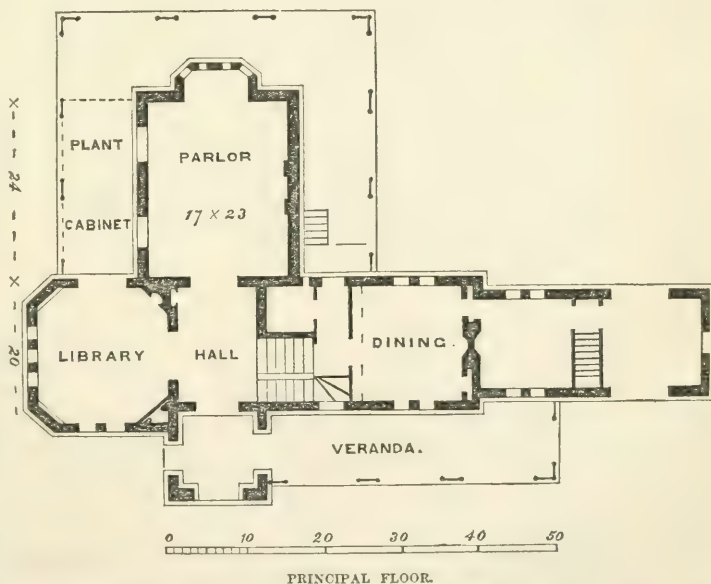
IN an editorial note, on page 29 of this number, we stated that we had engaged a well-known and competent gentleman to aid us in our Architectural Department, and that we had hoped to receive a beautiful design in season for our January number, but had been disappointed. We are pleased to state that by delaying the last sheet a few days, we have obtained the desired engraving, which forms the beautiful frontispiece. The architect is ALEX. J. DAVIS, of New York.

### WINYAH,

The Residence of Col. R. Lathers, New Rochelle, N. Y.

I send you a short description of the plan of WINYAH, having selected the same for publication in the *Horticulturist* as exhibiting the popular style of Americanized Italian, in tower, turret, plant-cabinet, and veranda.

The execution of work on this house may be noted for its substantial character—brick, in hollow walls, with the New Haven stucco, in imitation of freestone, by GILL, whose cement is proved to be durable in many works at New Haven of more than twenty years' standing. By deafening the floors, and insulating the stairs, (by brick wall,) this mode of execution renders every species of building safely fire-proof; *safely*, if the roof timbers be so inclosed by a metal covering, and the floors in contact with cement, that fire could only *char*, without consuming. Had this



been the mode of building in New York, (by no means original, but) as specified by me for the last twenty years, and laid before the Common Council of New York in 1834, the HARPERS and their insurers had not suffered, nor would the great fire have occurred in 1835.

The portal to WINSYH is under a turret of 12 feet diameter, 60 feet high, sheltering the hall door, and giving valuable room above, beside commanding one of the most extensive views in Westchester, comprising Long Island sound, Hudson river palisades, New York city, and Staten Island.

The perspective view and plan will mainly explain themselves, and the dimensions may be learned from the scale. On the right of the hall, a few steps ascend to the dining room, lifting the floor of the same so much above that of the library, parlor, and hall, that the kitchen below the dining-room may be wholly out of ground. A few steps connect the dining-room passage with the veranda; and an easy ascent leads to the chambers above, which are five in number, beside the attic and wing-building rooms. In the latter there is a covered carriage-way for horses in waiting, (or the same might serve for a wood-house.) There is a spacious veranda both in front and rear, and the whole is raised high upon a terrace, adding much to the character of the house, and ensuring dry and useful room in the basement.

THE SEASON.—Up to this date (December 16) the season has been one of extraordinary mildness. With us in Western New York, where winter usually sets in about the middle of November, we have been able to continue our out-door operations, with an occasional slight interruption, to this time. Indeed, for a week or ten days past, everything has been spring-like, and we can scarcely believe that it is December. Trees, and even cuttings, planted in October, have made new roots, and in many cases abundantly. Lawns have a fresher verdure than they had in September, and, in fact, everything looks unusual. To the gardener such weather has been particularly acceptable. His plant-houses have required comparatively no fire heat, and the plants never looked so well at this season. Christmas and New Year's bouquets must be unusually fine. His winter, and much of his spring work, has been pleasantly executed, and various projects in the way of fencing, draining, trenching, grading, walk making, &c., have been carried out twelve months sooner than he had expected.

The poor laborer, whose day's wages is his all, feels particularly grateful for this mild weather. Instead of being out of work, as he would have been had the ground been frozen, and thrown back on his scanty summer savings, he has been permitted to go on and add to them. An early and hard winter always falls hardest on the poor. We may live many years before we experience another such December; but, as we hear it said twenty times a day, "w emay get our pay for this before the first of April."

BLEAKER'S MEADOW PEAR.—H. L. SUYDAM, Esq., of Geneva, sent us some fine, well-ripened specimens of this variety December 8, saying: "The tree is a small one, about eight years old, and the fruit, until last season, was not considered good for any thing but stewing. Last fall my father-in-law picked the fruit and ripened it in the house." A notice of the history of this Pear will be found among the proceedings of the Pennsylvania Horticultural Society, which we shall publish in the February number.

RIPENING OF PEARS.—A gentleman writes us: "This fall I put in boxes *Louise Bonne de Jersey* Pears; some were in average temperature of 55°, others from 50° to 55°. Those in the coldest room, left there to ripen, were infinitely superior to the others. I assure you I had no idea of the value of that Pear before." This agrees with our own experience. A moderate temperature is better for the ripening of soft, melting Pears.



LARGE SPECIMENS OF THE DUCHESSE D'ANGOULEME PEAR.—In the *ad interim* fruit report of the Pennsylvania Horticultural Society mention is made of “a *Duchesse d'Angoulême* of enormous size—nearly five inches long by four and a quarter broad, and weighing twenty-five and a quarter ounces.” We are informed by ROBT. IREDELL, Esq., of Norristown, who presented the specimen, that the tree on which it grew was procured from the nursery and planted in his garden in the spring of 1852. In the spring of 1853 it was five feet six inches in height, blossomed at the proper season, and produced three Pears, all of which fully matured, and about the 5th of October were taken from the tree, and weighed as follows: one pound three ounces, one pound three and a half ounces, and one pound nine and a quarter ounces—the three lacking but a quarter of an ounce of *four pounds*! The *Duchesse* was unusually fine last season wherever we saw it. The publisher of this journal Mr. VICK, gathered from some young trees of his, only one year planted, we believe, a number of specimens with blood-red cheeks, and more melting and delicious than any we ever tasted before. His trees were fed with guano.

POMOLOGICAL NOTES.—I send you the following notes on Pears we are now using, Dec. 10. I have just eaten my last specimen of *Bourré Diel* and *Bourré d'Anjou*. It is not generally known, I think, that these two noble Pears, if gathered late and kept cool, will keep nearly as long as either the *Lawrence*, *Vicar of Winkfield*, or *Winter Nelis*; they ripen perfectly well in the cellar, too. My *Winter Nelis* and *Glout Moreceau* are both ripe, and will not keep much longer. Nothing can be more delicious than the *Winter Nelis*; the *Glout Moreceau* is also fine, but it would be better if ripened in a higher temperature. The *Vicar* will not ripen so as to be presentable at dessert without the aid of a higher temperature than the cellar. My specimens are now beautiful as they can be in color, a pale, clear straw color. The other day I was tempted to put some on the table, but my guests, who seized them eagerly, were sorely disappointed. It is an invaluable fruit, but it *must* have a week or two in a temperature of 50° or 60° before it is fit to be eaten. My *Easter Bourré*, picked in middle of September, are now ripe, and how delicious! I can not praise this Pear too highly. It ripens to complete perfection in the cellar without any other care than we give Apples, and we can have it all winter by picking at different times. Those picked in the middle of October are now green and hard, and will keep sound and fresh till April. *Epine Dumas* (*Duc de Bordeaur*) is a beautiful and fine fruit, but it requires ripening in heat to be perfected. It is as beautiful and better than *Vicar*, and must be much more extensively grown than I think it is. *Josephine de Maline* begins to ripen, and is good; an excellent keeper. It has much of the flavor of *Passe Colmar*; and the tree, too, resembles it in several features. Are they not evidently akin? *Bourré d'Arenbergs* are in their prime just now, and may keep a month longer. We unanimously set them down as “best,” in the same category with *Winter Nelis* and *Easter Bourré*, requiring no care in ripening—a Pear for every body. I must reserve other notes for the future. GENESEE.

THE WINE CROP IN OHIO, 1853.—A private letter from a gentleman largely engaged in the culture of the Grape and wine making at Cincinnati, conveys the following information:

“This has been the best year for the Grape since 1848. The yield from some of the vineyards in this vicinity was enormous—700 to 850 gallons per acre—although the general average for the county will not exceed 400. My own vineyard produced, from five acres in bearing, (12,160 vines,) 4,236 gallons of wine—847 gallons to the acre. The cost of the whole crop will be \$600 to \$700. I expect to get for my wine, \$1 to \$1.25 per gallon, when ready for sale next summer. This, you will say, is profitable farming from a small piece of ground. The Grape, however, requires a peculiarly favorable position and soil, with prompt and careful attention, to make it very productive; and then it will pay better than any other fruit I know of.”

**OBSERVATIONS ON EARLY FORCING.**—If we take a retrospective view of the science of horticulture for the last ten years, we shall certainly find that forcing early fruits has not progressed, but retrograded; a few, and very few, exceptions to the rule have been found, although especial claims have been insisted upon that the forcing department is more efficient now than it was at the above-mentioned period. Such, however, is not the case.

There is nothing in the whole routine of a well kept place, that places the skillful gardener in a higher position than fine crops of early fruit under glass. Since the introduction of improved methods of heating, and invariably claiming our attention, are the different modifications of heating by hot water—the low price of glass, compared with what it was some years since—the enterprise that characterizes some of the wealthy amateurs and gentlemen of refined taste—it is extraordinary that erections for the production of early fruits should be so seldom met with. Gentlemen witness, in many places that fall under their notice, sometimes poor crops, and oftener miserable failures, in structures every way calculated for a different result, and where nature has been but slightly assisted by artificial means. Hence they are deterred from erecting a house, or houses, especially adapted for the production of early fruit, as structures suitable for the purpose would secure an abundant supply, under *judicious management*, at the earliest possible period, and in the greatest perfection. Five hundred dollars expended on a house for the purpose of early forcing, would contribute much to the addition of securing a good dessert, beside being an annual contribution that would be hailed with delight, because occurring at a season of the year when ripe fruit would be a most grateful welcome.

Gentlemen should not be deterred from making an essay in the forcing department, because they may witness some experiments that are not successful. Every *practical gardener* has ambition to excel in the production of early fruits; although it is true that some gardeners may *excel as plant cultivators*, and find themselves wholly inadequate to conduct successfully an establishment where forcing is made a desideratum. Forcing early fruit should not be allowed to fall into disrepute, because the majority of gardeners may excel in embellishing their respective places in the highest artistic manner with plants, but are wholly inadequate to grapple with the science of forcing. Think of the gratification a gardener would have in placing a dessert upon his employer's table, at an early season of the year, second to none in the world; and horticultural societies would afford him an opportunity of "illustrating" that they were the best in his neighborhood. Then he might with propriety say, that "this dessert, sir, is the best in New York," or "Philadelphia" (as the case might be). Then the merits of a skillful gardener could be realized and appreciated. Interest having been excited in the growing crop, as it advances towards maturity, new interest would be felt for the garden and the produce. Nothing is better calculated to leave a more lasting impression, than to keep the table well supplied with fruits and vegetables.

By no means must it be understood that I am opposed to plant culture, and excellence in culture, combined with neatness—predominating characteristics in private establishments, which are sure to be favorably noticed. Still, however, it is to be regretted that gardeners do not pay more attention to the culture of fruit than they do, instead of devoting all their time and resources to plant culture, as is too often the case. Hence, a strong desire should animate every gardener, not to excel in one particular branch of the profession, but to have a thorough, *practical* education, so that it would be a matter of indifference to him whether he was called upon to produce a crop of Grapes, or Peaches, or Nectarines, in the month of April, or a collection of well-grown show plants in the month of May. And he who unites within himself the happy medium of excelling in both departments, may truly be styled a "*practical gardener*."

Should these few observations induce a more general practice, and bring early forcing more into notice than it is at present, the forcing of fruits especially, I shall hail such an advent with a strong conviction that better days are ahead for the horticultural world. It only requires to be successfully practiced, to make forcing an object of interest in every place of any claims to horticultural distinction. JAMES STEWART.—*Philadelphia, Pa.*

CONSTANT BEARING STRAWBERRIES. — In the December number of the *Horticulturist* the opinion is expressed that there is in the extract from the *Cincinnati Gazette* "a mistake in regard to *Hovey's Seedling* bearing from the 10th March until September," on the estate of Mr. C. A. PEABODY, near Columbus, Georgia. Early last summer I noticed the article referred to, as I had previously similar statements, whereupon I immediately opened a correspondence with Mr. P. on the subject, that I might become minutely acquainted with the facts. During that correspondence he sent me, as late as September, large fresh berries flattened out upon his letters as proof that his Strawberries were still in bearing. Editorial notices of a similar character attesting the same facts in some of the most reliable journals in the States of Ohio, Indiana, South Carolina, and Georgia, have also come under my observation, and I have just seen an editorial in the *Savannah News* of the 2d inst. (Dec.) which says: "We received yesterday from our friend PEABODY, of Columbus, by HARNDEN'S Express, a basket containing an earthen pot in which were nicely packed a cluster of Strawberry vines in full fruit, just as they were taken from the bed near Columbus on Tuesday evening last. The vines are fresh with the earth and roots, and bear, beside several large luscious looking specimens of ripe fruit, many green berries ranging from the earliest stages of berryhood to the almost full-grown *Hovey*. Mr. PEABODY informs us he has at this time half an acre of the growing fruit presenting the appearance of the basket sent." Mr. PEABODY himself is the horticultural editor of the "*Soil of the South*," and about the first of October I had the pleasure of a personal interview with him in this city, when he was in attendance at the Crystal Palace as State Commissioner, and then, in addition to our correspondence, he gave me the most minute description of his mode of treatment, and the strongest assurance of the facts. It seems to me we shall be obliged to credit the statements of fact, however much they may transcend our knowledge or experience. I have no doubt that Mr. PEABODY and Mr. LAWRENCE have given us substantially the facts in reference to the constant bearing of the Strawberry with them, although I have never given an opinion, as I am aware, that even the *Crescent Seedling* would prolong the season north, and I could only at any time express that as a hope. I still cherish the hope that we shall yet see that variety, and also *Hovey's Seedling* accomplishing it.

Mr. PEABODY says: "With my plants and directions, any common sense man may certainly have Strawberries at least six months in the year;" and he also says he has no doubt he can in New Jersey, by the same mode of cultivation, have an abundance of fine ripe *Hovey's* during the months of June, July, August, and September, until frost. He also says: "The four great requisites for a Strawberry bed are, proper location, vegetable manure, shade to the ground, and water, water, water. The whole secret is to cultivate for fruit, and not for vine or blossom. The lowest part of the garden is the best location, and ours is on poor pine land. No tree or plant should be near the Strawberry bed, but shade the ground with leaves and straw, and water freely to set the fruit and perfect it." He uses the *Large Early Scarlet* as impregnator, and further says he has "no idea that the *Hovey Seedling* can be taken from a luxuriant bed and be made to produce fruit longer than the common season. They must first go through the severe training which my method of culture gives them; this took some years to check the disposition to run." In no instance does he remove the blossom, or in any way retard their fruiting, and only uses such an amount of water daily, when dry, as is easily attainable and applied.

I regret my inability — on account of my removal to this city — to carefully follow out these experiments. Will not some one do it? R. G. PARDEE.—*New York*.

I have seen several articles in late numbers of the *Horticulturist* in relation to ever-bearing Strawberries, and also doubts expressed as to the possibility of pistillate plants producing fruit without the aid of staminate ones. I will relate my experience on the subject; it may, however, contain nothing new to others.

Having neglected my Strawberry beds this fall until near the middle of October, I then pulled out the superfluous plants and was surprised at finding several fine stems of ripe berries on my



*Heavy Seedlings*, and also some yet green, and others in blossom. The berries were fair size—not large, and of course not very high flavored. I never examined my Strawberry beds at this season of the year before, and of course am unable to say whether they have before produced a second crop. I discovered neither flowers nor fruit on any other kind. I use the *Large Early Scarlet* for fertilizers. The berries were upon the old vines which had borne before this season. R. B. WARREN.—*Alabama, N. Y.*

Strawberries, in common with most other fruits, do occasionally blossom a second time, and produce a second crop. Pear blossoms were quite numerous last September. Your *Heavy's Seedling*, producing fruit at a season when it was impossible for the berries to be fertilized with the pollen of others, goes to prove that fruits *may* be produced on pistillate plants without the aid of foreign pollen.

MR. MATHEWS AND THE CUREULIO.—The Hon. JAMES MATHEWS is decidedly one of the most energetic and untiring horticulturists in the West. At a comparatively early age he had the good fortune to be elected to Congress. For this honorable station he had nothing to press him forward but his industry, integrity, and ability. In Congress he was little celebrated for *much talking*, but gave high satisfaction to his constituents by the general correctness of his votes. He served four years. His position in Congress gave him ready access to the acquaintance of the principal horticulturists of the United States and Europe. The good opportunity which his position gave him he most zealously improved, and expended his *per diem* with a liberality which, had he been a millionaire, instead of a penniless boy, would hardly have been expected of him. He imported trees from all parts of the world with a most liberal hand. Nor has he been less lavish of his time. Before he went to Congress, he did whatever his time and means permitted. When in Congress, those leisure hours which many would have devoted to amusement or useless politics, he employed in his extensive horticultural correspondence, and in reading those valuable works which his additional means had enabled him to purchase. Since the expiration of his congressional service, some seven years, Mr. MATHEWS has devoted at least half his time to horticulture—chiefly experimental, and with very little cash value to himself. He informs me he has remained hour upon hour under his Plum trees watching the doings and habits of the Cureulio. He says the notion they can not fly is false; he has seen them rise perpendicular from the ground. In his opinion nothing but DEATH can save the Plums. He has tried almost every variety of medication—lime, sulphur, spirits of turpentine. I can not remember half, but his conclusion is that none of these are of any avail. He says, careful shaking or jarring them down on sheets and killing them is effectual; he has tried it. He also believes feeding a sufficient number of hogs under the Plum trees would answer. The tread of the swine and their destruction of the fruit would KILL the most of the Cureulios. His own remedy is to the DEATH, and needs only one application per annum, and will not cost over three cents per tree beyond what is required by ordinary good cultivation.

These are the facts, as I understand them. Mr. M. lives at Coshocton, our seat of justice, twenty-two miles distant, and I generally see him and his garden two or three times a year. During the past Plum season I called on him on other business, and found his Plums perfectly smooth and sound. A few days since I saw him at our County Court. Having noticed the remarks in the *Horticulturist* and in the *Country Gentleman*, I spoke of it to him. He says he wants no compensation without value to the public. Let a sum be subscribed by amateurs and horticultural societies large enough to induce the most active and skillful competition, and let that remedy take the *purse* which shall, after a fair trial of three years, prove best. It seems to me this would be just. Those who labor for the public good should not labor in vain, and especially when they work successfully. What amateur would begrudge a few dollars for a cheap, reliable remedy for the Cureulio? I hope a subscription will be started, open to free competition,

and to be paid only when the remedy shall be fairly proved. Who will start it? The money will never be needed unless the Grand Turk is first dethroned. Who of our wealthy and enterprising horticulturists will open the subscription and put the ball in motion?

I only know of Mr. MATHEWS' remedy, that his Plums were remarkably fine, and his soil is just that loose, sandy loam in which they delight. He is ready to submit his remedy to the committees of the Cincinnati, New York, Boston, and Philadelphia Horticultural Societies whenever a suitable premium shall be placed at their disposal. I will only add, if the laborer is worthy of his hire, Mr. M. well deserves a liberal reward if his *mode* is successful. ELI NICHOLS.—*Wolf-Pen Spring, Ohio.*

We entirely agree with Mr. NICHOLS, and we trust that Horticultural Societies will take the matter up immediately and have it put to the test. If individual subscription be necessary, we are ready to contribute.

FRUIT-GROWING IN IOWA.—At the late County Fair the Committee on Fruit did not report (for want of time, we suppose), but below will be found their interesting report:

The Committee on Fruit, in presenting their report to the society, would congratulate its members upon the fair show of fruit upon our tables; the prospect of an abundant home supply at an early day appears very good.

APPLES.—The number of exhibitors of Apples, the standard fruit of this latitude, is seventeen, and the number of varieties presented by them is sixty-five. Among them we find a number of the most valuable and leading varieties, presented, too, by several of the exhibitors, who report that the trees grow and bear well with them.

Indeed, we are satisfied from our examination and experience, that the apple is well adapted to the climate and soil of Central Iowa, and that with us the same varieties exceed in size and flavor those grown in the Eastern States.

Your committee are of opinion that Mr. CATTELL has presented the greatest variety of "standard" and popular Apples, and Mr. HIRAM GILBERT the second best.

No provision is made for a second premium; but your committee have determined to make no recommendation for the "best variety of fruits," as no one exhibitor presented a majority of the fruits on your catalogue; and instead of the amount assigned under that head, to recommend that it be divided between Mr. H. GILBERT, as above, and Mr. ALEXANDER JACKSON, for the best specimen of Plums, a very fine sample of *Coe's Golden Drop*.

The following persons exhibited specimens of Apples, the first seven but little inferior to the two already named: THOMAS MORFORD, G. W. KINCAID, WM. CHAMBERS, SR., JOSEPH WILLIAMS, JACOB LONG, PHILLIP WAGONER, of Louisa county; T. S. PARVIN, HUMPHREY, BURDETT, JOHN ZEIGLER, SAMUEL GILBERT, P. D. HUMPHREY, of Cedar county; W. H. MILLER, JOHN SHERFEY, AMOS LILLIBRIDGE, and CHESTER WEED. The latter had the greatest variety, but they were not presented for premiums.

QUINCES.—Of Quinces, the next on the list, there were three exhibitors, Messrs. ZEIGLER, OGILVIE, and PARVIN, the varieties being the *Apple* and *Pear-shaped*. The committee are of opinion that Mr. PARVIN had the "best specimen." These are the first, your committee believe, raised in this county.

PEARS.—Dr. WEED, the only exhibitor of this fruit, presented four varieties, all winter Pears. Several of our citizens have raised varieties of the summer Pear, but could not, or did not, preserve them for this occasion.

PEACHES.—Messrs. SAMUEL GILBERT, HUMPHREY, BURDETT, SINNETT, MILLER, OGILVIE, and DRURY, presented specimens of Peaches. Those of Messrs. GILBERT, OGILVIE, and SINNETT, were very fine, but, in the opinion of your committee, Mr. GILBERT's were the best specimens.

It being so late in the season, the number of exhibitors and varieties of this excellent fruit are much less than they would have been at an early day. During a residence of fifteen years in this State, we have seen but three crops of this fruit, so uncertain is it in this climate.

GRAPES.—Mrs. OGILVIE and T. S. PARVIN exhibited specimens of the *Catawba* and *Isabella* varieties; bunches large sized, and berries well formed.

Grape culture is becoming an object of great interest in the west; and from the experience of a part of your committee, we believe they do as well, or better, on the bluffs of the Mississippi than on those of the Ohio. Dr. WELD and J. J. HUBER have each raised a considerable quantity of this fine fruit, but have none upon our table.

AWARD OF PREMIUMS.—Best specimen of apples, James Cattell; second best, Hiram Gilbert. Best specimen of quinces, T. S. Parvin. Best specimen of pears, Dr. James Weld. Best specimen of peaches, Samuel Gilbert. Best specimen of grapes, (*Catawba*), Mrs. A. Ogilvie. Best specimen of grapes (*Isabella*), T. S. Parvin. Best specimen of plums, Alexander Jackson.—*Muscatine (Iowa) Journal*.

RIPENING OF FRUITS IN MICHIGAN.—*June 21st*—Gathered the crop of seven or eight trees of the *Black Tartarian* Cherry, part of which have now borne for three years. The tree proves very upright and vigorous, and quite ornamental; and the fruit large and fine, but very high flavored.

*Black Heart*, gathered at the same time, is very similar in both tree and fruit; the principal difference being that it is a little smaller, and more bitter before arriving at full maturity.

*Kentish*, or *Early Richmond*, is the earliest Morello yet in bearing. Gathered them to-day—nearly all ripe.

Received trees from an eastern nursery as *Carnation* which have this year borne a full crop, and prove in every respect identical with the last.

*May Duke* has borne three years, and fully sustains its long established reputation for flavor, size, and bearing.

Trees received from the east as *Florence* have now borne two crops, and appear to be identical with *Bigarreau Couleur de Clair*, or *Flesh-Colored Bigarreau* of DOWSING—ripe a few days earlier than *Elton* (bearing beside them), and decidedly superior to it in size and quality, although a casual observer might pronounce them identical. The *Elton* is, however, a more spreading or drooping tree, and so far a much greater bearer.

*June 25th*—Gathered the *Eltons* to-day. The very open, spreading trees were indeed a sight worth seeing, and challenged the admiration of all who saw them. They are, so far, the greatest Cherries that have fruited with me; and notwithstanding Mr. BARRY pronounced it and the *Black Tartarian* tender in this climate, (*Genesee Farmer* for 1850, p. 191,) they have, with me, passed safely through the trying winters of the past five or six years, embracing at least one of the most severe seasons that has been chronicled since the settlement of the country. We have trees of the sweet varieties hereabout of from fifteen to twenty years growth, and so far I have seen but a single case of the bursting of the bark, except among some quite young trees at Detroit. Indeed, I believe they succeed as well as the *Dukes* or *Morellos*.

Mr. BARRY also says of *Bigarreau Hildesheim* (*Fruit Garden*, p. 324): "The ends of the young shoots are apt to get winter killed;" but with me it has never lost a terminal bud during the three or four years I have cultivated it.

Also gathered the *Bigarreau*, which proves fully equal to its previous character, but as yet the *Elton* is the greater bearer. The *Bigarreau* is a more upright and compact grower, and consequently more ornamental.

Received trees from an eastern nursery as *Knight's Early Black*, which have now borne and prove identical with the above.

*June 28th*—Gathered *China Bigarreau*, now just in bearing. There is some doubt of its identity. It ripens earlier than I expected, is more tender, and is one of the best, if not the best, flavored Cherry I have yet in bearing. It requires further trial.

Received trees of *Holland Bigarreau* from two sources, one of which, judging from habit of growth, is correct; while the other, which has now borne two crops, is obviously spurious. The spurious fruit is very large, oblong heart-shaped, about two inches long, rather slender, set in a



very deep, narrow cavity. In outline and color it is much like *Napoleon*, but more broad and flattened at the apex; flesh very yellow and very firm, even more so than *Napoleon*. It will ripen a week later than *Bigarreau*, which it somewhat resembles in the growth of the trees.

*American Amber*, *American Heart*, *Black Eagle*, *Napoleon*, *Belle de Choisey*, and *Burr's Seedling*, have borne small crops this season, and promise well.

July 3th—*Elkhorn*, or *Tradescant's Black* has for two seasons produced a few specimens, but not enough to judge of its merits with certainty.

*Sweet Montmorency*, *Plumstone Morello*, and *Large English Morello* are just beginning to color, and will last some time after the common Morellos of this region are gone.

*Merville de Septembre* is now bearing its second crop, yet small and green. It ripened last year the last of August and first of September.

Currants are now just ripe. I received bushes last year from two sources as *Red* and *White Dutch*, and I had previously what I called *Common Red* and *White*. They have this year borne side by side, and I am unable to discover the slightest difference, either in wood, foliage, or fruit, between the *Dutch* and the *Common*. In fact, from all I can gather, I feel assured that in this part of the country, and also in Western New York, whence my "*Common*" stock was derived, the only difference between them arises from difference of treatment. The *Red*, in both cases, is a more vigorous grower than the *White*, and more acid.

*May's Victoria*, received from Mr. DOUGALL last year, is now just beginning to color. It bore last season—is quite large, and ripens very late. It is not quite as high flavored as the *Dutch*.

*Black English* is later still, and on account of its musky flavor is not attacked by birds, and as it loses its musk by cooking, it is valuable for tarts, jellies, &c.

*Antwerp Raspberries*, *Red* and *White*, are now just beginning to ripen, and *Fastolf* and *Francia* are coloring, and will soon be on hand.—T. T. LYON, in *Farmer's Companion and Horticultural Gazette*.

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### Notices of Books, Pamphlets, &c.

LANDSCAPE GARDENING: OR PARKS AND PLEASURE GROUNDS. With Practical Notes on Country Residences, Villas, Public Parks, and Gardens. By CHARLES H. SMITH, Landscape Gardener, Garden Architect, &c.: with Notes and Additions by LEWIS F. ALLEN, author of "*Rural Architecture*, &c. New York: C. M. SAXTON.

The appearance of such a book as this in American dress is proof that Landscape Gardening is beginning to attract attention among us. Nearly all our books on Landscape Gardening are English works, and our ideas on the subject are mostly of English origin; and yet there is very little opportunity for the exercise of the art in this country, to the extent to which it is usually carried in England. English Landscape Gardening needs modifying to adapt it to the wants of a comparatively new country, and the habits of the American people. Americans who have never visited Europe know but little of the character or extent of English parks, either public or private. The park which the English Landscape Gardener describes, or to which he applies his art, is one of hundreds of acres, perhaps extending miles in every direction, in which hundreds of deer are kept, as well as flocks of sheep and herds of cattle. To prevent the too near approach of these to the house, perhaps a wire or sunken fence, encloses thirty or forty acres immediately around it, and this—"the dress ground"—is in beautiful condition—the grass kept soft and smooth as velvet by constant mowing, sweeping, and rolling. The buildings are in keeping with the extent of the grounds, large and massive, (an American would be apt to think gloomy,) bearing striking evidence of its age and importance. It is the "seat" of Lord RATTLEBRAIN, and has been the "seat" of the RATTLEBRAIN family for centuries, and bids fair to be for centuries to come; for the younger Lord RATTLEBRAIN commences life just where his father left off.

In the same house, with the same grounds, the same servants and tenants; for the farms for many miles belong to the estate, and are leased to the farmers who occupy them, and whose sons may continue to live on them, as their fathers did before them.

With us things are entirely different. JOHN SMITH, JR., cannot commence life as JOHN SMITH, SENIOR, ended it. The property accumulated by the elder SMITH is divided between the younger SMITHS. If the father has a fine house and grounds, in which to enjoy in old age the fruits of early industry, these must be sold, as neither son can afford to invest his portion in unproductive property, or to live a life of ease and luxury. Each one must commence where his father commenced, and work out for himself a fortune and a name. One engages in mercantile pursuit, another seeks his fortune in the West, and soon becomes known as a member of Congress from some western district, or is "on the stump" to secure himself a seat in his own State Legislature. Another purchases a farm in his native State, and in a few years is the "highly esteemed correspondent" of some popular agricultural journal, and President of the County Agricultural Society; or, if he happens to be a man of fine taste, soon makes himself known to the horticultural world as the skillful cultivator of choice fruit.

It may be asked, "Of what advantage then is the study of Landscape Gardening to us?" We answer, "Much, every way." Although we have but few very rich, and few extremely poor, yet we have men of wealth, (and the number is increasing as the country becomes older,) who, becoming tired of the pursuit of Mammon, are seeking pleasant homes in the country. These wish to surround themselves with all the beauties and luxuries of country life. Another class, still doing business in our cities and villages, are securing themselves suburban homes, where they can enjoy to a great extent the pleasures of both city and country. Both of these classes should understand the principles of landscape gardening. There is another, and a still more numerous class to whom we would recommend the study of landscape gardening. Every farmer who owns a hundred acres of land can afford to have a pretty park or lawn. The farmer who places his house within a few feet of a dusty road, as if building on a small city lot, shows neither economy nor good sense. With a little study and labor he may make a lawn that will add much to the beauty and comfort of home. Select and fence in a few acres around the house; plow deep; if not sufficiently shaded, plant shade trees; make the surface as smooth as possible, and sow to red top and white clover; keep this grazed short, and you will have a lawn that will cost you little or nothing.

The American editor, MR. ALLEN, is a gentleman of good taste and large experience on all matters connected with country life in America—well known as one of the ablest and most indefatigable friend of agricultural and horticultural improvement in our State. We are glad to see his pen and his influence brought into activity where they are so much wanted. The notes, with which he has interspersed this volume, are written in his usual easy, dashing style; but we must confess they add very little to the value of the book: a very large number of them are absolutely superfluous, being intended merely to bestow upon the author's teaching his "unqualified assent" or "emphatic concurrence." The main points which strike us as demanding explanation and suggestion, to show wherein the English practice should be modified to adapt it to this country, are, in a majority of cases, passed over. In one place, for instance, the author in treating of the decoration of the "pleasure ground villa," recommends planting the *Magnolia grandiflora*, Sweet Bay, Arbutus, and Common Laurel. Now, a note from the editor stating that in our Northern and Middle States not one of these trees will bear the climate in the open air, would be

valuable to the uninformed reader, but no such hint is offered; on the contrary, the editor, speaking of the chapter in which this occurs, says the subject is "so fully discussed that hardly an additional word is required."

The important subject of hedges is dismissed in the following summary way:

"Hedges, may, in time, be introduced, and perhaps to good purpose; but we are somewhat doubtful of their adoption to any considerable extent, save, perhaps, in the use of Osage Orange, on the western prairies."

In speaking of "planting the Pinetum," the author says: "As a general rule, the best season for planting Pines is in October." The editor should surely have inserted a caution here, for the benefit of northern planters, at least.

We might, if space permitted, go on and point out scores of omissions, more important even than those alluded to. The notes have evidently been written in a hasty, careless manner; and we beg Mr. ALLEN to take the book up again in a more pains taking mood—dash out many of the superfluous notes, and add others with such care and discrimination as will invest them with value, and entitle them to confidence.

The book is one which should have the widest circulation.

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TRANSACTIONS OF THE WORCESTER COUNTY HORTICULTURAL SOCIETY FOR 1852 AND 1853: containing the Annual Reports of the Committees on Fruits, Flowers, &c, with the lists of Premiums awarded, the Officers of the Society for 1853, and a list of the Members.

From the Address of the President we learn that the past season there were 97 contributors of Pears, making 700 entries; 56 contributors of Apples, making 229 entries; 85 contributors of other fruits, making 213 entries; 37 contributors of vegetables, making 151 entries; 33 contributors of flowers, making 86 entries. The President compares their exhibition with one he attended in England as follows:

"As it is known that I have recently had the opportunity of visiting horticultural exhibitions in Europe, I hope it will not be deemed impertinent that I anticipate the question, How does this show stand in comparison with those which I saw in England. This I will attempt to answer, briefly and fairly, with no narrow prejudice of nationality, and with a grateful recognition of the cordial hospitality enjoyed by myself, which the farmers and horticulturists of that country freely offer to every interested visitor. As the general character of all these exhibitions was the same, I will take as an example the 'Horticultural Exhibition of All Nations,' at Cheltenham, under the professed patronage of Queen VICTORIA, Prince ALBERT, the Emperor of the French, the King of the Belgians, and many other distinguished personages. In addition to a very large hall, there were four tents for exhibition, whose united length was 1300 feet, and the width of the tables was eight or nine feet. Three bands of music, with different instruments, played in turn in the beautiful garden. There was the same difference between that vast and magnificent display, and the more limited collection before us, that is found to exist between the privileges reserved to the aristocracy by the institutions of England, and the advantages offered to every citizen in our own country. The English show presented a variety of most rare and splendid flowers, in such size and perfection as it is difficult, with any expense, to attain in this climate. Except the Roses, and they were very choice and perfect, and some new and costly Petunias and Verbenas, and a few other flowers, not easily to be procured, the flowers were of the kinds cultivated with difficulty and great cost by artificial heat. The space occupied by the department of fruit and vegetables in this extent of 1300 feet of tent, was not, in my opinion, larger than one of the tables of this hall, not more than seventy feet. I am glad to say this estimate is confirmed by the judgment of a friend and townsman, now present, who was with me at Cheltenham. There was but one plate of Peaches, which were large and beautiful, raised by artificial heat,



such as in the month of May were sold in the London market at 10s. sterling, or about \$2.50 for each Peach; and in July the price was reduced to 40s. sterling, or about \$10 per dozen. The Peaches of England are magnificent in size and color, but they have not the richness and flavor of the New England Peach. I do not remember any Pears at that show, and I saw few in England. The season was said to be unproductive for that crop. The Apples were few and inferior. Without attempting a full enumeration, I will say a word of the Strawberries, Grapes, Nectarines, and Pine Apples, which are the best fruits of the country. The Strawberries were of astonishing size, and the best kinds were more richly flavored than ours, and they are expensive. The Grapes were large and good, and raised under glass. The Nectarines were large and delicious, and were sold in July for 40s. sterling, or about \$10 per dozen. The Pine Apples were very superior in size and flavor to those imported into this country, and such as were sold in July, in London market, at 8s. sterling, or about \$2 per pound. There was but one plate of Tomatoes, and this, in midsummer, though an excellent specimen, was not better than the box which our Vice-President, JOHN C. WHITIN, Esq., of Northbridge, sent to me, and I exhibited extensively to the members of this Society in February last. The result of the proposed comparison may thus be distinctly stated. The English exhibition was a display of rare luxuries, which, like the privileges of the favored classes in England, are not within the reach of the great body of the people; while the articles of our collection, like the civil and social advantages of our country, are withheld by no artificial impediment or disability, from any citizen who will make the necessary effort to obtain them."

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INDUSTRIAL UNIVERSITIES FOR THE PEOPLE. Published in compliance with resolutions of the Chicago and Springfield Conventions, and under the Industrial League of Illinois, by J. B. TURNER, Chairman of the Committee.

The object of this pamphlet is one—not properly speaking within the scope of this journal, but as education is a matter in which we are all deeply interested, and as Professor TURNER, who is the master spirit of the movement, is well known to the readers of the *Horticulturist*—it will not be deemed improper in us to give it at least a passing notice. The pamphlet contains the proceedings of "The Farmers' Convention" at Greenville, Ill., held Nov. 18, 1851, of the Springfield Convention held June 8, 1852, and of of the Chicago Convention held Nov. 24, 1852, together with various addresses, extracts from newspapers, memorials, &c., on the subject of industrial education. The following is the plan of action proposed by the League:

*Memorial to the Honorable the Members of the Senate and House of Representatives of the State of Illinois*:—The undersigned, citizens of this State, regarding with admiration the facilities which the civilized world at present affords for the liberal education of the members of the learned and military professions, and justly appreciating the benefits which they have derived therefrom in their pursuits in life, desire the same blessing for ourselves, and our children, and for each and all the members of the industrial classes of this State. We, therefore, would humbly pray your honorable bodies so to dispose of the Fund given by the General Government to this State for the advancement of learning, that a State University may be endowed with ample means for the liberal and practical education of all classes in society, each in their own several pursuits in life; and that these funds may be immediately committed to a Board of Trustees for this purpose in general accordance with the plan of the Convention already approved by large numbers of our most intelligent and patriotic citizens.

*Principal Director*—J. B. TURNER, Jacksonville.

*Associate Directors*—JOHN GAGE, Lake county; L. S. PENNINGTON, Whiteside county; BRONSON MURRAY, La Salle county; J. T. LITTLE, Fulton county; WM. A. PENNEL, Putnam county.

I. There are now in the hands of the State of Illinois, \$150,000 in money, and about seventy-two sections of land selected at an early period, and probably worth as much more.

II. The land and money was donated by the General Government to this State as a trust fund, apart from and independant of the Common School fund.

III. With this fund the State is required by Congress to establish a STATE UNIVERSITY or High Seminary of learning.

IV. The members of this Industrial League are such, and such only, of the inhabitants of the State of Illinois, as desire that when this State Seminary is established it shall be upon the following rational and impartial principles:

V. It shall be designed to furnish to the great industrial classes of the State, our farmers, merchants, and mechanics, each in their own sphere, the same thorough, liberal, and practical education in those various sciences underlying their several pursuits, and in all processes, principles and arts connected therewith, as our colleges and professional schools now afford to their students of theology, medicine, law, and the art of war; and shall be provided with all needful apparatus—lands, grounds, gardens, animals, drawings, models, instruments, and engines—for the proper elucidation of the same, as other schools are provided with their necessary apparatus.

To combine the friends of this interest, the Industrial League of Illinois was incorporated by the Legislature, February, 1853.

1. With a capital of \$20,000, to be raised by members, fees, and donations;
2. With a Board of one Chief Director and five associates; whose office it shall be
3. To print and distribute books, pamphlets, and papers, explaining the advantages and necessity of this system of education.
4. To employ lecturers to visit all parts of the State for the same purpose, and to appoint agents for making collections, &c.
5. To circulate and present to the Legislature and to Congress petitions, urging the adoption of this plan for a University, and the liberal endowment thereof by Congress lands, and by State funds in each State of the Union.
6. To receive from each member ten cents admission, and ten cents annual subscription, with fee for diploma and such voluntary donations as may be contributed.
7. The funds so collected to be applied to the payment of lecturers, agents, and officers, (other than Associate Directors, who shall receive no compensation for services,) to the payment of printing and such incidental expenses as shall be approved by the Board: and on the establishment of a University as herein contemplated, any surplus funds in the treasury to be paid over to the treasury of such University.
8. Members of the Industrial League, who desire it, may withdraw from their membership upon giving notice to any agent of the Board, provided their dues are all paid, including those for the year in which they withdraw.
9. The year of the League commences with the first day of each January.

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A DESCRIPTIVE CATALOGUE OF FRUITS CULTIVATED AND SOLD BY THOS. RIVERS, of the Nurseries Sawbridgeworth, Herts., England.

We are always glad to receive Mr. RIVERS' catalogues. They are without exception the most instructive and reliable of any we receive from across the water. He commits errors, to be sure, but it would be wonderful if he did not. He is a most persevering collector of novelties, and of course is not unfrequently deceived. Mr. RIVERS has given a great impulse to fruit growing in England; he has introduced some new items of practice that bid fair to work well in that cool, damp climate. He now strongly recommends *biennial removal* as necessary to the successful cultivation of pyramidal Pears on Pear stocks; he also recommends it for Cherries on Mahaleb stocks. His specimen quarter of Apples, he says, contains 350 sorts—one plant of a sort—and yet only occupies 350 square yards. The trees are planted  $3\frac{1}{2}$  feet apart, row from row, and  $2\frac{1}{2}$  feet apart in the rows, and biennially removed in November.

WESTERN HORTICULTURAL REVIEW.—We learn that Dr. WARREN is about to revive this journal. The first number is to be issued on the first of January.

CATALOGUE RECEIVED.—*Descriptive Catalogue of Fruit and Ornamental Trees.* From J. S. DOWNER, Elkton, Todd county, Ky.

### Answers to Correspondents.

Is there any danger of getting too much manure around young Pear trees? I have two which do not appear to thrive well. In preparing the ground for setting them, I put into the holes a half bushel of the sweepings of a blacksmith's shop, mixed with cinders and ashes from the forge, and also about an equal quantity of well-rotted stable manure, and incorporated them thoroughly with the soil for two or three feet around; after they were set I mulched them with coarse manure. The trees are on Pear stocks.

I find the *Doyenné Boussock* one of the finest growing Pears on Quince, but with me it does not bear well. I have two fine trees five years old, which have never produced half a dozen Pears; they bloom profusely every season, but set no fruit. The *White Doyenné* and *Louise Bonne de Jersey* are far the most productive varieties that I have yet fruited.

Much has been said about the relative hardiness of seedling and budded Peach trees. I have both growing in my garden—some eight or ten of each—both are of the same age, and have received the same treatment, and I can discover no difference as yet in their hardiness or productiveness. They are six years old, but never have produced a peck of fruit, all told, although they are large enough to produce two bushels each, and very thrifty. R. B. WARREN.—*Alabama, New York.*

It is quite possible to manure Pear trees too heavily, and especially at the time of transplanting. We do not approve of manuring at this time, preferring to apply it afterward as a dressing, when the roots are established and active.

THE MONTHLY BUSH ALPINE.—By to-day's mail I have forwarded two Strawberry plants, which were brought to me last night, containing ripe Strawberries, green ones, and blossoms. They are much wilted, and I fear will not live till you receive them. They have borne profusely during the entire season, commencing the last of February, and ripe fruit and blossoms are on my table to-day. The only care they have received is to have the grass pulled out from among them occasionally. I would like to know the name of the variety—if it is an old variety, or the *Crescent Seedling*. The fruit is medium sized, bright crimson color; calyx reflexed when ripe, so that it separates from the fruit in gathering; bearing properties fully medium at all times. Wm. BEAL.—*Loudon, E. Tenn.*

The plants received were very dry; but judging from their appearance we should pronounce them the *Monthly Bush Alpine*.

PEARS.—By what rule is the *Nelis* classed among winter Pears? Mine ripen even in the cellar early in November. I had but a few specimens this fall, but they were sweet and delicious.

It is an early winter variety, keeping very well with us usually till about January; in fine eating all through December. You probably picked yours too soon, and the cellar was warm. We find that winter Pears should be picked as late as possible, and then be kept in a cold place until cold weather, when the temperature of the cellar becomes low.



CAN you not give some "hints" in regard to setting a small garden to fruit trees and shrubs, that we of the West may combine the *useful* with the ornamental? I have a garden about 50 by 100, which I am anxious to cultivate to the very best advantage. How and what kinds shall I set to have the fruit soonest and the greatest variety—say of Apples, Pears, Plums, Cherries, &c., &c., of all kinds that will succeed in this latitude? A few hints in your excellent work, the *Horticulturist*, will be acceptable to at least one subscriber. L. M. M.—*Sheboygan Falls, Wis.*

We will endeavor to comply with your request; but we will thank you to state if you wish to plant your entire 50 by 100 with fruit trees, and whether it be a front garden or not. These circumstances will necessarily modify the advice we may give you.

### Horticultural Societies.

**NORTH-WESTERN POMOLOGICAL CONVENTION.**—Many of the most devoted lovers of Pomona, have been looking forward with bright anticipation to the assembling of this body of very intelligent pomologists. The meeting was held at Chicago from the 4th to 7th of October, and exceeded the expectations of the most sanguine, in the number and beauty of the fruits presented. They were spread in masses upon extended tables, and constituted one of the most interesting exhibitions ever made in the western country. The chief contributors are here mentioned, to show the range of country represented at the meeting, and the number of varieties grown. But the list is not complete; owing to the hurry of the occasion, it was impossible to procure the whole, while acting with a committee upon a troublesome duty—that of examining nearly two hundred seedling fruits.

Delegates were present from eight States. Among them, CHARLES DOWNING, from Newburgh, New York.

The meeting, with its discussions, was a very pleasant occasion to all, and furnished an opportunity of making and renewing many agreeable acquaintances. The proceedings will shortly be published in detail.

Burlington, Iowa, was selected as the place of holding the next meeting, on the 26th of Sept. 1854, when the session is to last four days.

Messrs. Avery and Comstock, of Burlington, Iowa, had a very large and choice lot of fruit. They exhibited about 25 varieties of Pears, 20 of Peaches, and 150 of Apples. Their fruits are much larger and finer than those sent by eastern pomologists. M. L. Dunlap, of Dunlap's Prairie, exhibited 60 specimens of Apples, 4 of Pears, 20 of Peaches, one hard-shelled Almond, Nectarines, and Isabella Grapes. Dr. Haskell, Rockford, 62 varieties of Apples, 5 do. Pears, Isabella and Catawba Grapes. Arthur Bryant, of Princeton, Ill., 52 varieties of Apples, 4 of Pears, and one of Orange Quinces. A. Montague, Wadham's Grove, 50 varieties of Apples. Dr. Kennicott, of the Grove, 50 varieties of Apples, and Isabella and Catawba Grapes. Dr. L. S. Pennington, Sterling, Whiteside county, 70 varieties of Apples, 6 do. of Pears. R. Hathaway, of Little Prairie Ronde, Mich., 20 varieties of Apples, 1 seedling Pear, 2 seedling Peaches. Smiley Sheperd, Hennepin, presented 90 varieties of Apples, 6 do. of Peaches, and Isabella Grapes. William Stewart & Son, Quincy, from 90 to 100 different kinds of Apples. Samuel Edwards, Lamaille, exhibited 47 varieties of Apples, 3 of Grapes, Strawberries and Apricots in spirits. E. Ordway, of Freeport, 12 varieties of Apples. A. R. Whitney, Franklin Grove, 41 varieties of Apples. D. B. Drake, of Elk Grove, 4 varieties of Grapes, 7 of Peaches, and a number of seedlings; also of Pears 8, Apples 54. E. W. Brewster, Freeport, 19 varieties of Apples, 4 of Pears. J. M. Humphery, 20 varieties of Apples. N. Hotchkiss, Belvidere, 34 varieties of Apples. J. J. Thomas, Wayne county, N. Y., a large collection of fruits. Wm. H. Loomis & Co., South Bend, Ind., 42 varieties of Apples, 35 of Pears. A. H. Ernst, Cincinnati, 56 varieties of Apples, 4 of

Pears, 2 stalks of Japan Pear. A. Fainestock, of Syracuse, N. Y., 104 varieties of Pears, 50 of Apples. Underhill & Carpenter, 26 varieties of Apples. D. F. Kinney, Rock Island, 24 varieties of Apples, 1 of Grapes, 2 seedling Peaches, and some Sweet Potatoes. H. H. Holmes, of Rockford, 33 varieties of Apples, 4 of Grapes, 5 of Plums. Hubbard & Davis, Detroit, 16 varieties of Apples, 7 of Pears, and 6 of Peaches. F. K. Phoenix, Delevan, Wis., 60 varieties of Apples. Ezra Stetson, of Galesburg, Mich., 86 varieties of Apples, 3 of Pears, and 1 of Quince; 8 large ones in a cluster. J. C. Holmes, of Detroit, 28 of Pears, and a quantity of Clinton Grapes. Cyrus Bryant, of Benton county, 29 varieties of Apples, and 3 of Pears. H. S. Finley, 20 varieties of Apples, 2 of Pears, and 1 box of Grapes. John Belangee, Dover, 42 of Apple, 29 of Pears. E. Harkness, Peoria county Ill., 68 varieties of Apples, 2 of Grapes, 1 of Pear, 1 of Quince. E. S. S. Richardson, 24 Apples, 3 Pears. John T. Seelye, of Kendall, 14 Apples. Sterling Perkins, of Cold Water, Mich., 60 varieties of Apples, 4 Pears, 3 Grapes, 1 Quince; also six bottles of new cider. C. R. & M. Overman, Canton, 60 varieties of Apples, 8 of Pears, 1 Quince, 1 Peach, and Osage Orange.

The discussions were very interesting, and resulted in some definite results. They were continued from time to time, and a brief epitome of parts is all that can now be offered. The reader is referred to the pamphlet which will be furnished to those forwarding the member's fee of one dollar to Dr. KENNICOTT, West Northfield, or to S. Edwards, Secretary, Lamoille, Ill.

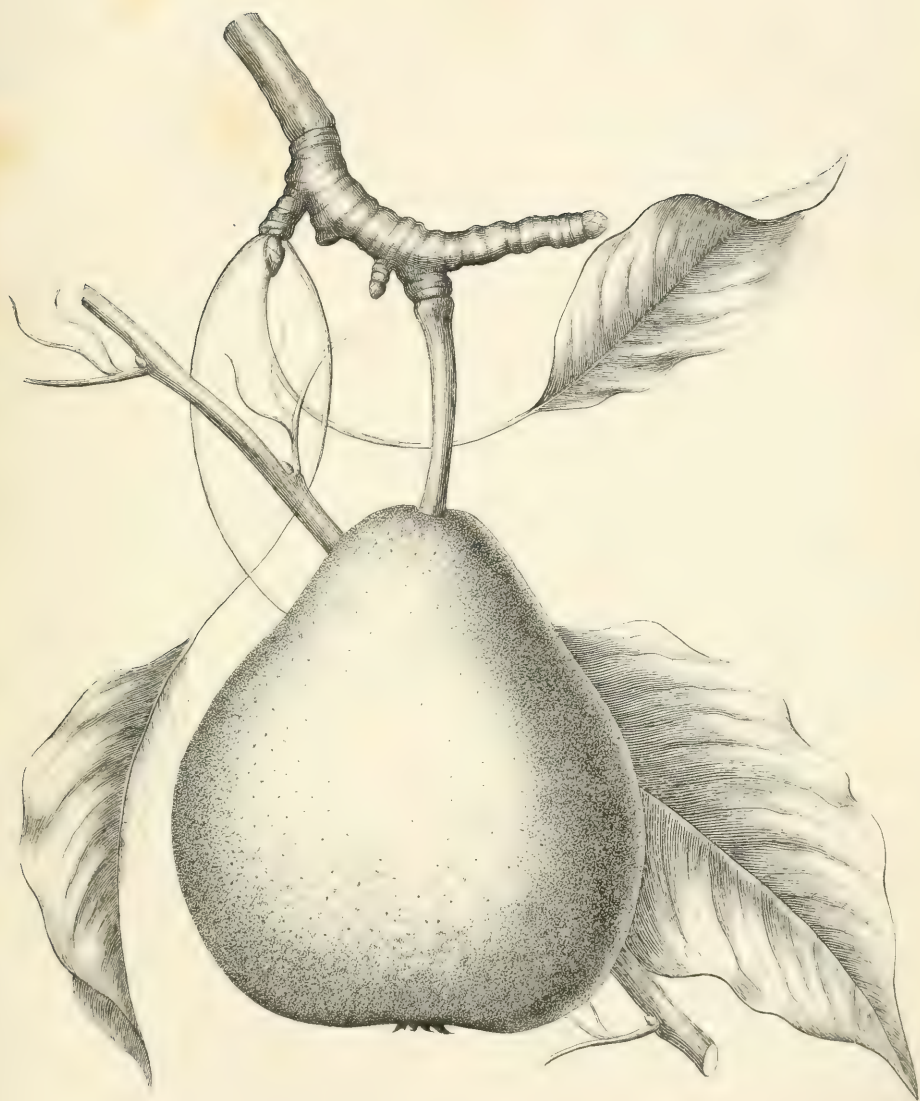
*The Grape.*—The Isabella, recommended as one of the best, if not the best, for extensive cultivation in the northwest. The Catawba was voted superior in all localities where it would ripen. The Clinton not sufficiently known for recommendation.

*Pears.*—The Bloodgood and Dearborn's Seedling, recommended for further trial. Madeleine, too subject to blight. Bartlett, best for general cultivation. Flemish Beauty, one of the best. Louise Bonne de Jersey, very good. Seckel, the best. Washington, not sufficiently tested. Beurre Diel, not sufficiently tested. White Doyenne and Easter Beurre, best for general cultivation. Prince's St. Germain, too little known. Winter Nelis, good winter Pear—not successful in all localities. Passe Colmar, very good. Des Nones and Hosenschenck were introduced and recommended by A. FAINESTOCK, of Syracuse, N. Y.

A paper was read containing remarks on the cultivation of the Pear by Professor KIRTLAND, of Ohio, embodying much valuable information touching the nature of the blight, the benefit resulting from the application of special manure, the elements most essential to their successful production, etc. Other papers were referred.

*Peaches.*—Crawford's Early and Early Bernard were recommended for general cultivation. The Early York, best Early Peach, large White Cling, recommended. Tippecanoe, not well known. Old Mixon Free, good, but surpassed by Early Strawberry. Crawford's Late, recommended. George the Fourth, best of its season. La Grange, thought good.

*Apples.*—Summer Rose, recommended. Early Joe, recommended for further trial. Holland Pippin, with its synonyms, not worthy of general cultivation. Lyman's Pumpkin Sweet, recommended for culinary purposes and stock feeding. Mother Apple, not worthy of further trial at the West. Hubbardston Nonsuch, ditto. Herefordshire Pearmain, esteemed worthy of extensive cultivation. Blue Pearmain, recommended for limited cultivation. Pomme Grise, ditto. Peck's Pleasant, recommended for further trial. Roman Stem, worthy of cultivation. Golden Russet, of Western New York, recommended for limited cultivation. English Russet, ditto. Milam, after a general and somewhat long discussion, a motion was put to consider it as unworthy of cultivation. This elicited further remarks, which went to show the fact that the popularity of a fruit may bear no comparison to its true worth. Spice Sweeting, recommended for further trial. The Rhode Island Greening was the subject of some remarks, which seemed to show that it does extremely well at the North, while it does not succeed at the South equally well. The discussions were very spirited.—*Western Horticultural Review.*



THE BROWN PEAR (P. PARISIENSIS).





## Hints on the Rearing and Management of Trees.

VAST sums of money are annually spent in this country on trees; it would be impossible to make a close estimate of the amount, but we can not be very far out of the way in putting it at a million of dollars. We believe we could show by figures that this is not, as it may appear to many, an immoderate estimate; for more than one quarter of that amount may be set down to Rochester alone. This gives us some idea of the extent and importance of our arboricultural interest, yet it attracts little attention. The men engaged in rearing and planting trees are not those who make much noise in the world. We have no arboricultural societies to collect information or incite to experiments and observation—no public gardens or arboretums to test theories and modes of culture—the whole matter thus far has been left to individual effort and enterprise; and as both growers and purchasers of trees usually proceed upon the principles of economy, no great improvement has been made upon old methods;—at least, this business has certainly not advanced in the same ratio as some other branches of the useful arts and sciences. How many of those engaged in the planting and culture of trees, have taken pains to acquire the slightest possible degree of knowledge concerning their structure, the functions of the different parts, and their relative connection and influence upon each other? Not one in five hundred. A man spending a hundred dollars for trees does not consider it worth his while to consult the best books that have been written on the subject—he does not consider that a dollar spent in that way might save him fifty in the management of his plantation. A few words of oral instruction from some one perhaps as ill-informed as himself, or a few hints which he finds on the cover of a nurseryman's catalogue, supply all the needed information. We are happy to admit exceptions—numerous too. Books and papers are read and studied; but the few who read and seek information from such sources are, when compared with the number of persons who plant trees, but a drop in the bucket. Frauds of all kinds are perpetrated upon people thus exposed by ignorance; for there is no pursuit under the sun exempt from dishonest and tricky persons. It is not surprising that we hear, every year, people complain bitterly of their trees. Some they lose totally the first season; others linger along for years without making any considerable growth, while the cause remains a complete mystery. "They were nice trees, well planted, and every way well cared for." Now there are many reasons for these failures; and if people were as well informed as they should be on this subject—if they possessed a correct knowledge of the essential properties of a tree fit for safe and successful removal, and understood properly what good planting and good treatment consist in—they could readily account for their losses.

We propose, now, to offer a few suggestions on these topics—first, in regard to the qualities of trees, and how these are to be secured; and secondly, on planting and subsequent treatment. We may as well say at the outset, that we are not about to

offer either a new theory or practice, but simply to point out certain principles and details of culture and management, well understood and universally approved by experienced practical tree-growers.

In the first place, a very large number of the trees sent out from the nurseries are not fit to be planted. We must not be understood now as alluding to any nurseries in particular. The fact of our being a nurseryman will not prevent us from expressing our convictions freely; and when we charge malpractice on the trade, we are prepared to shoulder our share of the blame. We intend our remarks to be applied in a general way, however; and we believe all candid nurserymen will admit the truth of what we are about to say.

It will be generally admitted that *hardiness* is one of the most important qualities of a tree, to fit it for safe removal. How is this to be attained? It is very well known that nearly all purchasers of trees prefer such as are *tall* and *straight*, with a smooth glossy bark, indicating what is called "thriftness." *Height* is the greatest requisite—in fact, the *sine qua non*—with by far the greater number of purchasers. Now, nurserymen must consult the tastes of their customers, and they are compelled to adopt a system of culture that will produce such trees as they find most saleable. They must either do this or abandon the trade. To produce these tall, smooth-barked trees, they must manure their ground highly, and plant closely. In these dense nursery plantations the light is pretty effectually excluded from all parts of the tree save the top; and as, according to an unalterable law of nature, trees and plants grow toward the light, the tops push upward, and few or no side branches are formed. Those who have not seen this exemplified in the nursery, may have seen it in the forest. If a number of Elms or Maples, for instance, are planted closely in a group, and others separately, on the same sort of soil, we find that those planted close together shoot upward rapidly, forming tall, smooth, naked trunks, with a few branches only at the top; while those standing apart in the open space grow in height slowly, but throw out numerous side branches, the trunk is thick, the bark furrowed, and the trees are so different from the others as to have scarcely a characteristic in common, save the foliage. These tall trees, with few branches, grown in the shade and shelter, have few roots. In a natural state the roots always bear a due proportion to the branches. We find that a tree standing in an open field, and having a wide-spread head, will have roots extending three or four times the distance that those of much more lofty trees do, growing in a thick grove or forest. It is on this account that trees left standing when the forests are cut down, seldom survive the shock of the first gale; they are broken or torn up by the roots. Nature beautifully adapts everything to its situation and circumstances. The tree in the depth of the forest is sheltered on all sides, and requires but few roots to resist the force of the wind, or branches to protect its trunk. The tree in the open field, exposed on all sides, requires an ample supply of both. It grows moderately; its trunk is stout; its wood is firm, compact, and hardy; its bark thick; its roots numerous, wide-spread, and powerful; its branches ample, evenly disposed, and nicely balanced. There it stands, fitted out completely to meet the requirements of its position.



There is valuable instruction here for us all. Nurserymen know that when their rows of trees are thinned out—say one-half or three-fourths removed—the remainder, instead of pushing upward, as they had done before, begin to throw out numerous branches, the trunk thickens, and the roots spread and strengthen rapidly. One season's growth, under such conditions, gives them such a hold of the ground that it requires three or four times the amount of labor to remove them that it did the year previous, when they stood very close. On this account such trees, although generally regarded as culls, prove most successful when transplanted, and are preferred by experienced planters, even if they be defective in form.

Trees rapidly grown, forced with a rich soil, and drawn up in the shade and shelter of close nursery rows, are as ill-fitted to stand the shock of removal into the open ground, exposed to the full force of the sun and wind, heat and cold, as are the tall and slender trees that have grown up in the heart of the forest. The young trees have the advantage in being more plastic: they suffer, and almost die; but the inherent vigor of youth enables them, in many cases, to weather the storm. But even where they do survive the shock, it is severely felt, and shows itself in the slow and feeble growth which follows removal.

In gardens and sheltered grounds this difficulty is of less account; but how small a number of all the trees planted enjoy the benefits of shelter! Scarcely any one dreams of nursing and hardening their trees for a period previous to their final planting; and yet, in a multitude of cases, it would be a prudent and profitable course—and so especially with all the more rare, valuable, and delicate trees, shrubs, and plants. Even in England, where the climate is much less rigorous and changeable than ours, such proceedings are recommended and practiced. In a work which we noticed some time ago,\* it is recommended, in planting valuable and delicate evergreen trees, to plant them first in some sort of open boxes that would allow of their removal, once or twice a year, from a more sheltered to a more exposed place, until they would finally become sufficiently hardened to bear the exposure of their permanent situation.

It is quite unnecessary to multiply illustrations showing the advantages which young trees derive from being reared in open situations, sufficiently exposed to admit of the growth of side branches, and acquire what we call *hardiness*. Our nursery rows are in general too close, and the trees too close in the rows; we grow three or four times too many on the ground. We are aware that it would add considerably to the cost of the trees, to give them so much more space; but would it not be a saving for purchasers to pay one-third or one-fourth more for them? We very much fear that we shall have no very extensive reform on this head until people become much better informed on the subject of arboriculture—when, instead of looking for the tallest trees in the nursery, they will look for stout, well-rooted trees, that have been well exposed to the sun and air, and thus hardened and fitted to encounter the trials of a removal.

One reason why so few good pyramidal-shaped young trees are to be found in the

\* *Practical Hints on Planting Ornamental Trees*, by STANDISH & NOBLE, page 479, vol. iii.

nurseries, is their closeness. Although they are cut back, no stout side branches are permitted, because of the want of a full share of light around the lower part of the trees; any shoots that do start out are soon smothered, and the entire growth is thrown into two or three shoots at the top. A good pyramidal tree can not be produced—we can not secure the first branches—without a clear space of two or three feet on each side; whereas, they usually stand within a few inches in the nursery rows.

Another advantage in giving trees abundant space, to which we have already alluded, is, that it promotes the extension of roots. In fact, whatever favors the extension of branches, also favors the roots; because they depend so much upon each other as to be co-extensive. But the soil has a powerful influence on the roots. In stiff, clayey soils, trees have bare, forked roots, and few fibres; and that, too, even when the growth of the tree is good. Such trees do not transplant well. Dry, friable soils, are more favorable to the growth of numerous fibrous roots, and trees taken from them transplant more successfully. Culture has a great influence on the roots, too. If the ground be kept continually clean and friable by cultivation around the roots, they become much more fibrous and better for transplanting than if the surface of the ground be permitted to harden into a crust, or to be covered with weeds or grass.

Having the trees thus properly grown in abundant space, dry friable soils, and clean culture, the next important point is to take them up properly; because, no matter how a tree is grown, if it be badly taken up it is not fit for successful transplanting. Trees are more universally injured—*ruined*—in this operation than in any other. We believe it is so in all parts of the world, for our trees imported from Europe are about as badly bruised and mangled as any we ever see at home. At the seasons of transplanting, nurserymen are generally hurried, and have to employ raw, untrained laborers, who know or care as much about roots as they do about comic sections. A man may stand over them, and show them, and talk to them until he is hoarse, and yet the roots will be cut and mangled. It really requires considerable skill and experience, and a great deal of *care*, to dig trees well. Some have long tap-roots that penetrate the ground deeply, while others spread widely near the surface of the ground. These different characters require different modes of proceeding. Some insist that it does a tree no harm to cut off some of its roots; but we hold that the roots should be taken out of the ground without the slightest bruise or mutilation, if possible. The necessity for curtailing the tops would thus be obviated, and there would be some hope for the trees. We are utterly opposed to the lopping off both roots and branches of trees, and thus converting them into bare poles before planting. The generally commended proceeding of pruning or shortening the tops, is a necessity only because the roots scarcely ever escape injury in some way or other; and as leaves must receive a supply of nutriment through the roots, it is only reasonable that when the roots are reduced the leaves should also be reduced in a corresponding degree.

Then comes packing for transportation. The less the roots of trees are exposed to the air, between the time they are taken from the ground and the time they are planted, the better. This should never be forgotten. If roots be of any value, it can only be when they are sound and fresh. More than nine-tenths of all the trees planted

have to be carried a greater or less distance from the nursery, and consequently require packing; and many people, to save a little cost, will run the risk of having their trees ruined. We are satisfied that vast quantities of trees are lost from bad packing and exposure in transportation. It requires considerable skill and care to pack well. Very few of the European nurserymen can pack for America, as importers well know: and on this account we are always compelled to purchase at higher prices than we might do, in order to secure good packing; for if we were to get trees for nothing, they would be a hard bargain unless well packed. Good packing is equally essential in transporting trees from one part of our own country to the other, because we have great delays. We can get a package almost as soon from Liverpool to New York as we can from New York to Rochester; so that parcels of trees should be always fitted up to go safely twice the distance intended, or twice the time that ought to carry them to their destination. What signifies fifty cents or a dollar per hundred, in the cost of securing trees for carriage, compared with running the risk of losing them or having them so damaged that they will not recover for years. Every man who orders trees should say emphatically, "Pack my trees in the best manner;" and nurserymen should be held responsible for this, as much, at least, as for the quality of the trees.

Having now briefly called attention to what we consider a prevailing defect in the growth of young trees, that unfits them for safe and successful removal, and the necessity of care in packing for transportation, we shall hereafter take occasion to say something on planting and subsequent management.

### THE BEURRE GIFFARD PEAR.\*

THIS and the *Doyenne d'Ete*, figured in the November number of our last volume, are both of comparatively recent introduction from France, and prove to be two of the most beautiful and excellent of all our summer Pears. We have fruited the *Beurre Giffard*† several years, and have found it uniformly fine, both in appearance and quality. It was before the Pomological Convention at Philadelphia, in 1852, and discussed as follows:

"MR. SAUL, of New York. I move that the *Beurre Giffard* be put on the list of Pears that promise well. This year I have had very good specimens. I consider it one of great excellence. It is an abundant bearer, and will be a great addition to our early Pears.

"MR. NORTON, of New York. I have seen a specimen in Western New York, and I believe it is a good Pear.

"HON. M. P. WILDER. The chair will state that it is a New Pear from France. I have fruited it for two years. It is of good size, and acute-pyriform in shape; and my impression is, that if picked before ripe, it will be a valuable Pear. It is rather a poor grower, as far as my experience goes, on the Quince.

"MR. BAXTEE, of Pennsylvania. I have found it an excellent Pear; and for an early Pear, there is no better, as regards its beauty and growth.

\* See Frontispiece.

† Pronounced *Giffard*, accenting the last syllable like *far*.



"Dr. ESULEMAN, of Pennsylvania. I have found it a most excellent Pear. It has fruited in our county, and has proved with us decidedly the best early Pear we have.

"Mr. CABOT, of Massachusetts. I have fruited it two years on the Quince, and I coincide entirely with the preceding remarks.

"The vote being taken, it was decided unanimously that the *Beurre Giffard* be placed on the list of Pears that promise well."

Thus we find it succeeding well at widely distant localities in New York, Massachusetts, and Pennsylvania; and we have been informed, by private letters, of its success in various other States. HON. JAMES MATHEWS, of Coshocton, Ohio, considers it one of the best summer Pears he has yet tested. It is not unsafe, therefore, to recommend it to every one making up a collection of choice Pears.

Fruit—medium size, occasionally large; we have measured some specimens, grown



BEURRE GIFFARD.

Two outlines, showing the variation in size and form.

on Quince stock, that were three inches long and two and three-eighths wide; acute-pyriform. Stalk—usually about an inch long, sometimes one and a half inches, pretty stout, and inserted without any depression, except in rare cases. Calyx—closed, segments long and stiff, in a narrow basin. Skin—greenish yellow in the shade, sprinkled with carmine dots; sunny side red, varying from light to dark, and mottled with dark spots and stripes. Flesh—white, tender, and juicy, with a sprightly, vinous flavor, and somewhat of a spicy perfume. It is greatly improved, as all summer Pears are, by being gathered before ripe. The best we have had were ten days in the house before eaten—from the 1st to the 10th of August.

The tree is remarkably distinct in its growth, wood, and foliage,—readily distinguished from all others. The young shoots are long and slender; the bark is reddish-brown; the leaves small, with very long and

slender leaf-stalks, and large stipules. It succeeds well, both on Pear and Quince stocks, but must be classed among the moderate growers; a *Beurre Diel*, a *Duchesse d'Angoulême*, or a *Vicar of Winkfield*, of the same age, on the same soil, would be nearly twice as large: yet it is not a bad grower, and it bears young and abundantly.

## REPTON'S LANDSCAPE GARDENING AND ARCHITECTURE.

ONE of the latest labors of the lamented LORDON, was to collect and edit, in one volume, the works of REPTON. This was one of the first of five volumes which he intended to be a complete Encyclopedia of Landscape Gardening; another was to embrace Italian, French, and Dutch schools, which represent the Geometric style; another was to treat of the "Modern, or Landscape style," as introduced by KENT, and illustrated in the writings of SHENSTONE, WHATELEY, and MASON; another the Picturesque school, as represented in the writings of GILPIN and PRICE; and the fifth the "Gardenesque," which was LOUDON's own style, or so named by him. LOUDON regarded REPTON's school "as combining all that was excellent in former schools, and in fact as consisting of the union of an artistical knowledge of the subject with good taste and good sense." REPTON labored in the same direction as did DOWNING, to unite and harmonize country houses with the surrounding scenery. His works are filled with instruction, and should be carefully studied by all who wish to acquire information or cultivate their taste on these subjects. We copy the following chapter, with its illustrations, giving some account of English cottage residences three hundred years ago. Some of the most elegant cottages erected in this country, within the past ten or twelve years, are in this old English style, though variously modified, according to tastes and circumstances, and to adapt it to the present state of society.

"ON DATES OF BUILDINGS.—A cottage, or keeper's house, was deemed necessary at Apsley Wood, about three miles from Woburn Abbey. The Duke of Bedford (to whom I am indebted for numerous opportunities of displaying his good taste) one day observed,

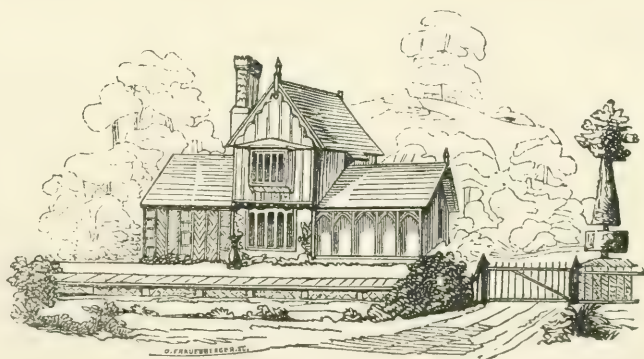


Fig. 1. ENGLISH COTTAGE BUILT OF TIMBER.

Prevalent from the reign of Henry VI to Henry VIII, and erected by the Duke of Bedford, at Apsley Wood, near Woburn Abbey, in 1810 and 1811.

that out of the numerous cottages called Gothic, which everywhere presented themselves near the high roads, he had never seen one which did not betray its modern character and recent date. At the same time, his Grace expressed a desire to have a cottage of the style and date of buildings prior to the reign of Henry VIII., of which only some imperfect frag-

ments now remain. Adjoining this building, an attempt has been made to assimilate a garden to the same character, and the annexed plates (figs. 1 and 2) will furnish an example of both.

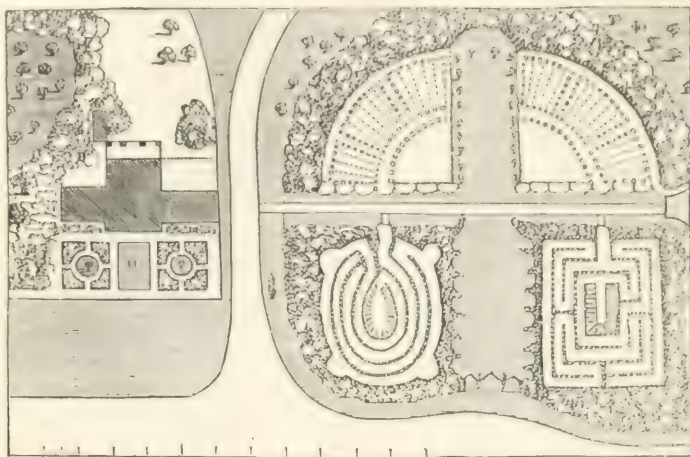


Fig. 2. GENERAL PLAN OF THE GARDEN,

appended to the timber cottage of the fifteenth century, erected at Apsley Wood, on the roadside from Newport Pagnel to Woburn.

"A communication of some curious specimens of timber houses was made to the Society of Antiquaries, in 1810, which was ordered to be engraved and printed for the *Archæologia*. But this building does more than any drawing to exemplify many of the parts which have been thus rescued from the effects of time.

"To admirers of genuine Gothic forms, the following note may prove acceptable, as showing the authorities for all the details of this cottage (fig. 1).\*

"The hints for this garden (fig. 2) have been suggested by various paintings and engravings of the date of King Henry VIII and Elizabeth; and even the selection of flowers has been taken from those represented in the nose-gays of old portraits of the same period, pre-

\* *Not by J. A. R.* This cottage serves as a specimen of the timber houses which prevailed in England from about the year 1450 to 1550; that is, from the reign of Henry VI to that of Henry VIII. As few buildings of this date remain entire, and every year reduces their number, the general plan of this cottage is not copied from any individual specimen, but the parts are taken from the most perfect fragments of the kind, some of which have since been destroyed. The hint of the lower story, being of stone, is taken from a building near Eltham Palace, except that the windows are here executed in oak instead of stone. In some buildings, both of brick and of stone, it is not uncommon to see oak windows used, as at Wolterton Manor House, East Barsham, Norfolk, and at Carlow Priory near Norwich. Stone and brick corbels, supporting beams, may be found at Lynn Regis and at Ely. The brick-noggin between the timbers is copied from a timber house in Lynn Regis, built by Walter Conys, in the reign of Henry VI or Edward IV. The hint of the upright timbers being ornamented with small arches (over the center buildings, was taken from a timber house near Kelvedon, Essex, which has since been destroyed. The gable-board is copied from a house at St. Edmundsbury, and is not uncommon. The form of the pinnacles (of which few specimens now remain, being the parts most exposed to the weather,) is taken from some in brick, or stone: the only one I have ever found carved in oak is at Shrewsbury. The square flag is copied from one at Hornchurch, Essex. The projecting bow is taken from a window in Norwich, but the tracery of it is not uncommon; a specimen in oak is still to be found at Knowle, in Kent. The tracery of the lower window is taken from a timber house in Coventry; but this, also, is not uncommon. The windows are all taken from an earlier date than the end of the reign of Henry VIII; that is, before they were divided by cross-bars, which did not prevail in wood till the reign of Edward VI, Elizabeth, and the early part of the seventeenth century. The design of the porch is a hint from various specimens



served in the picture gallery of Woburn.\* This attention to strict congruity may appear trifling to such as have never considered, that good taste delights in the harmony of the minutest parts of the whole; and this cottage, however small, compared with modern mansions, is a tolerably fair specimen of the style and size of private houses three hundred years ago; for, although the castles and collegiate buildings were large, some of the dwelling-houses of respectable persons did not much exceed this cottage in dimensions or comfort, when one living-room was often deemed sufficient for all the family.

"The change in customs, during three or four centuries, makes it very difficult to build such dwelling-houses as shall contain all the conveniences which modern life requires and at the same time preserve the ancient forms we admire as picturesque: yet, the prevailing taste for the Gothic style must often be complied with; and, after all, there is not more absurdity in making a house look like a castle, or convent, than like the portico of a Grecian temple, applied to a square mass, which Mr. PRICE has not unaptly compared to a clump of bricks: and so great is the difference of opinion betwixt the admirers of Grecian and those of Gothic architecture, that an artist must adopt either, according to the wishes of the individual by whom he is consulted; happy if he can avoid the mixture of both in the same building; since there are few who possess sufficient taste to distinguish what is perfectly correct, and what is spurious in the two different styles; while those who have most power to indulge their taste, have generally had least leisure to study such minutiae. To this may, perhaps, be attributed the decline of good taste in a country with the increase of its wealth from commercial speculation.

"By the recent works of professed antiquaries, a spirit of inquiry has been excited respecting the dates of every specimen that remains of ancient beauty or grandeur; and the strictest attention to their dates may be highly proper, in repairs or additions to old houses; but, in erecting new buildings, it may reasonably be doubted whether modern comfort ought to be greatly sacrificed to external correctness in detail; and whether a style may not be tolerated which gives the most commodious *interior*, and only adopts the general outline and the picturesque effect of old Gothic buildings.

"Among the works professedly written on architecture, there is none more effective and useful than that by Sir WILLIAM CHAMBERS; and it were much to be wished that a similar work on the Gothic style could be referred to; but it has been deemed necessary for artists to study the remains of Greece and Rome in those countries, whence they generally bring back the greatest contempt for the style they call Gothic. The late much-lamented JAMES WYATT was the only architect with whom I was acquainted who had studied on the Continent, yet preferred the Gothic forms to the Grecian. As the reason for this preference, he told me, about twenty years ago, that he conceived the climate of England required the weather moldings, or labels, over doors and windows of the Gothic character, rather than the bolder projections of the Grecian cornices, which he often found it necessary to make more flat than the models from which they were taken, lest the materials should not bear

of open porches, and particularly the cloisters of old alms-houses, or short galleries leading to dwelling-houses, as at Clapton, near Lea Bridge (since destroyed), &c. The design for the door of the cottage is taken from one remaining at Sudbury, in Suffolk. The chimneys are copied from those at Wollerton Manor House, at Barsham, Norfolk, published in the fourth volume of the *Vetusta Monumenta*. The ornaments painted on the posts and rails are taken from the picture of King Henry VIII and family, now in the possession of the Society of Antiquaries.

"\* The plan of this garden, as given in FORBES' *Hortus Woburnensis*, plate XV, differs from that here given, though not materially. Mr. FORBES has given an extract from the *Red Book* of Woburn Abbey, by which it appears that Mr. REPTON recommended the following flowers, as still to be found in very old gardens, viz., 'Rosemary, Columbine, Double-Crowfoot, Clove-Pink, Marigold, Double-Daisy, Monkshood, Southernwood, Pansies, White Rose, Yellow Lilies, Turk's-cap,' &c.—*Hort. Wob.*, p. 296. J. C. L.

the change of weather to which they were exposed in this country: and this accounts for the occasional want of boldness imputed to him in his Grecian designs. In his Gothic buildings, to unite modern comfort with antiquated forms, he introduced a style which is neither Grecian nor Gothic, but which is now become so prevalent that it may be considered as a distinct species, and must be called *Modern Gothic*. The details are often correctly Gothic, but the outline is Grecian, being just the reverse of the houses in the reign of Queen Elizabeth and King James, in which the details are often Grecian, while the general outline is Gothic. In the buildings of that date, we observe towers rising boldly above



Fig. 3. GOTHIC WINDOW—EXTERIOR.

the smallest fragment of genuine Gothic often reconciles to the painter its admission into the landscape: even although the great mass of the building may offend the eye of the antiquary, or man of correct taste, by its occasional departure from the true Gothic style.”

the roof, and long *bower* windows breaking boldly from the surface; but in Modern Gothic all is flat, and the small octagon turrets, which mark the corners, are neither large enough to contain a screw staircase, nor small enough for chimnies; yet this style has its admirers, and therefore I have inserted a specimen, although I conceive it to be in bad taste, and have placed it betwixt the Grecian and Gothic, not knowing to which it more properly belongs. If a door, or window, or even a battlement, or turret, of the true Gothic form, be partially discovered, mixed with foliage, it stamps on the scene the character of picturesqueness, of which the accompanying vignette (fig. 3) may serve as an example; and thus the

## PRUNING AND MANAGEMENT OF THE PEACH TREE.\*

### SECTION IV.—THEORETICAL EXPLANATION OF THE VARIOUS OPERATIONS OF PRUNING.

59. The tree being planted as before directed, the next care is to regulate it every year by pruning, so as to cause it to produce shoots proper for training, according to the intended form. But before entering into the details of the operations that a tree requires, from the time of being planted to that of its death, it is highly necessary to explain the general principles, the application of which frequently occurs, and which, once explained, will not require to be repeated when I detail the successive manual operations. We shall commence by describing the instruments that are used.

#### I. *Necessary Implements and Tools.*

60. The tools or implements necessary for pruning fruit-trees are the *scateur*, the pruning-knife, and the saw.

\*Continued from January number.

I need not describe these instruments, which are sufficiently known; I will only comment on the *secateur*. This instrument is now used by nearly all the growers at Montreuil. It can be used more expeditiously than the knife, and is perfectly fitted for all amputations necessary for small branches. Still, when some of the stronger branches require to be cut back closely to their origin on the main branch, the pruning knife is employed in order to make the amputation as near as possible to that branch, and also to make a very clean cut. Again, the pruning-knife is made use of for heading back young trees when planted, and for pruning the ends of the wood-branches. In fact, when the branch is too strong, the pressure which the *secateur* occasions in cutting it across often produces gum or canker, which may cause the loss of the branch. This objection to the *secateur* exists even in the case of small branches, above all, when badly adjusted; but when this instrument is well made, nothing injurious results from its use, only the wound is slower in healing. The first trials of the *secateur* at Montreuil were not favorable to it, because the instruments we then had were far from being perfect. Their use, in fact, was on the point of being abandoned, when M. LEMAIGNAN, locksmith at Montreuil, applied himself to make some of great superiority; and it is to this circumstance that the almost universal use of the *secateur* in our country is due. Messrs. ARNHEITER and BERNARD, working locksmiths at Paris, also make very good ones.\*

61. When a large branch is to be cut off, a hand-saw with a narrow and very long blade is made use of. But as the teeth of the saw tear the bark and wood, the cut must be immediately smoothed with the pruning-knife, and then immediately covered with grafting-wax, or with grafting-clay. These precautions are essential for the preservation of the tree. Whatever instrument be used for pruning, it must be very sharp, so that the cut may be smooth and clean. The cut should be a little oblique, the knife being inserted at the side of the shoot or branch opposite the bud, and slanting through, so that the point of the slant may be one-twelfth to one-sixth of an inch above the point of the bud, according to the strength of the branch and the season of pruning. The greatest length should be given in winter.

## II. *Of Pruning, properly so called.*

62. The name of winter-pruning is given to the principal pruning, because it is generally performed at that season. As for us cultivators, who have a large number of trees to manage, we have no fixed time of pruning. I have occasionally pruned some of my trees in December, with the same result as those that were pruned later. It may therefore be concluded that it can be done from January till April: but I recommend it to be done soon rather than too late; for when vegetation is active, pruning causes a more sensible reaction on the trees. There are, however, cases where late pruning may be of use. When a tree not yet growing is pruned, it loses no sap; for on the latter beginning to circulate, it flows to the buds, which, by expanding, afford it an outlet; at the same time the cuts are so far dried up as to offer a sufficient resistance to the escape of the sap. If, on

\* ARNHEITER, place de l'Abbaye, 9; BERNARD, rue Saint-Jacques, 213.



the contrary, we prune when the sap is actively circulating in the tops of the shoots, their pores, opened by the cuts, allow a portion of it to evaporate. Whence the conclusion, that it is proper to prune old trees when the sap is down, because they have none to spare; and that, on the contrary, it may prove beneficial to prune young or very vigorous trees after the sap has risen. The loss of a part of this fluid can not be disadvantageous to them; for, by moderating their vigor, it insures the production of fruit. We must not forget that fructification weakens the trees. One of the objects of pruning is to diminish the superabundant strength of a tree; and when once it has put it in a state for fruit-bearing, pruning maintains a due balance between the production of wood, and that of fruit, so as to economise the strength of the tree, and insure its prolonged existence. Since I have been a cultivator, I have had numerous opportunities of convincing myself, by experience, of the correctness of this observation.

63. To render the operations of pruning more intelligible, I shall consider it in two points of view: 1st, the pruning of wood-branches; 2d, the pruning of fruit-branches.

64. 1st, *Pruning of the Wood-branches.* Its principle is a consequence of their natural organization. I have explained (19—26) what is a shoot, and what is a branch. The first, which ultimately becomes the second, is furnished throughout its length with wood-buds, or with shoots of large or small size; and is always, itself, terminated with a bud which is designated by the name of terminal *bud*, or *eye*, or *growing-point*. The sap, which tends to rise in all trees with great force, but more especially in the Peach, gives a greater development to the terminal bud than to the others, which become gradually weaker in proportion to their distance from the top of the shoot, and as they come nearer to their origin at the place of the last pruning. The result of this constant natural tendency is, that we can direct the sap to whatever lateral bud we please on that shoot, by cutting the latter at a very short distance above, to make a new terminal bud, or eye, which takes the name of *an terminal combiné*, to distinguish it from the natural terminal eye, and because the effects of pruning are combined in its development. It is a bud, or eye, rendered terminal by pruning.

65. Thus the shortening of branches has not the effect of stopping their growth, but that of giving a great vigor to the eye above which the cut is made; and to the lower buds a strength which varies according to their distance from the bud to which the shoot was cut back. This bud, in growing, forms a shoot which constitutes a new prolongation, terminated by a growing-point; and is furnished, in turn, with lateral wood-buds.

We now perfectly understand that, as we can make any lateral bud a terminal one, by pruning above and near it, we can choose it according to our requirements and the end we have in view.

66. This is the fundamental principle of pruning the wood-branches. They should be pruned long or short, according to the strength of the tree. In those that are vigorous it is not uncommon to see branches make shoots of from four and a half to six and a half feet long in one season, and sometimes even of greater length. In such cases it is well not to prune them short, because, by leaving them at considerable

length, there is space for several shoots likely to be produced of medium strength for furnishing the branch. This is a better mode of subduing the impetuous growth of young trees, than that of delaying the pruning till such time as the wood and flower-buds commence to open, and thus cause a loss of sap as mentioned (62). Moreover, I have only spoken of late pruning in order to meet a case where, from some cause, the operation could not be performed at its proper time; and it should be understood that, under these circumstances, it is the youngest and strongest trees that suffer the least from such delay.

67. If, on the other hand, short pruning is adopted, it will produce strong young shoots, often too near each other, the vigor of which can neither be repressed by pinching, nor by any other operation. There would be no resource left but to cut them out at the following pruning. This increases the number of wounds, weakens the tree, and prevents it from assuming a regular form, with branches tapering uniformly from their bases to their extremities.

68. Therefore, short pruning must not be adopted, except on the wood-branches of feeble trees. It is advisable in this case, because it would be improper to give them a greater length of wood than they can nourish; and because it is desirable that branches should have a thickness in proportion to their length. In cases like these, short pruning concentrates the sap, and the branch thus pruned becomes thicker. When ultimately such a tree takes a more active growth, the shoots, when pruned, must accordingly be left at greater length.

69. The Peach tree, trained in the square form, is first set off with two main branches (*branches mères*); and, in order that its form may be complete, each of these must be furnished, on its under side, with three *secondary branches*, which are called *lower*; and on its upper side with three *secondary branches*, called *upper*.

70. In gentlemen's gardens, where the walls are higher than ours, four lower and four upper secondary branches may be established on each of the main branches; but as they are formed in the same way as the other three, I shall confine myself to describing the operation according to the method I pursue with my own wall-trees.

71. The operation that forms the lower secondary branches, which should always be permitted to grow before the upper ones, is based upon the above-mentioned principle (64); that pruning to a wood-bud favors its development, and that of the eyes that are beneath it, in proportion to their proximity. Therefore, the wood-bud, which is immediately below the terminal one, is that which takes the next greatest growth. This being the case, when we want to form a lower secondary branch, we prune the leading shoot of the main branch (A, fig. 7) to an eye on the upper side or in front of the shoot, the next lower bud being on the under side. The first is intended to prolong the main branch, the second to form a lower secondary.

72. For the formation of a lower secondary branch, we can also make use of a shoot or of a summer lateral, if they spring from immediately below the bud to which the main branch has been pruned. The shoot or summer lateral is either left entire, or pruned back to the first wood-bud; and it is trained in the direction which it ought to take. It is sometimes useful to facilitate its development by one or more longi-

tudinal incisions on the main branch immediately above it, and extending to the base of the shoot.

73. In pruning the lower secondary branches, it is best to cut to an eye situated on the under side of the branch. In cutting to an eye on the under side, the shoot from it has a natural tendency to take the direction we desire. The same holds good in pruning the main branches, after the formation of the three lower secondary branches; but previously it would not, owing to the alternate position of the buds. For the prolongation of the main branches, we should generally cut to an eye so situated as that the one immediately below it may be on the under side for the development of a lower secondary branch. The eye to which a main branch ought to be shortened must not, however, be chosen in all cases in this manner. Under some circumstances it may be preferably shortened to a bud placed on any side, provided it be at the proper height, and the position of the shoot is afterwards regulated by nailing. When a branch is stronger than its fellow, its pruning must be so managed as to check it; while the weakly branch must be pruned in such a manner as to promote its growth: and thus equality will be ultimately restored. With this aim, I cut back the stronger to a triple wood-bud (13), and destroy the middle one, which is always the strongest, with the point of the pruning-knife. As soon as the remaining two are grown up, I preserve the one that appears the best fitted for the object in view, and the other is cut off. Lastly, when there is a strongly-marked inequality, the weaker branch may be cut back to a vigorous shoot which may be made the leader; and in training, this must be allowed to grow as freely as is consistent with the regularity of the tree.

74. With regard to the upper secondary branches, they are formed, when it is time to do so, from a fruit-branch suitably placed, of the thickness of a quill throughout its length, of moderate vigor, and which has been several times pruned back. To accomplish this, the successional bearing-shoot is cut out close to its base, and the branch that has borne fruit the year before is pruned to a wood-eye for a leading shoot. The formation of upper secondary branches must be watched progressively, in order that their base may be always well furnished with branches that shall not be over-vigorous for fruiting. This requires much care, and pinching and disbudding must be resorted to, in order to check the tendency of the sap to rise most abundantly through vertical channels. They are also pruned to a triple bud for a leader; and frequently, when they still prove too vigorous, they are cut back to a well-placed lateral, the latter being shortened to a suitable wood-bud.

75. From what has been said, it is now evident that there is no great difficulty in pruning wood-branches; and any one can insure success when the operations necessary to be performed on them, from the time the tree is planted till that of its complete formation, shall have been detailed.

76. 2d, *Pruning the Fruit-branches.* In a Peach tree, trained according to the square mode, if we except the two main branches and the twelve secondary branches that compose the skeleton, all the others may be considered as shoots and fruit-branches of a mixed nature; for the greater number of them bear both leaves and fruit.

77. The way of obtaining the greatest possible quantity of fruit from a tree, without



exhausting it, consists, then, in the art of keeping the whole extent of all the leading branches well furnished with shoots capable of producing fruit, a property which they lose when more than one year old. We must therefore know how to procure a succession of these by suppressing those branches that have borne fruit, and which, after that, are merely wood-branches. This is done by properly pruning the fruit-shoots, and by promoting the growth of others to succeed those that have borne fruit.

78. On the fruit-branches there are eyes which may be single, double, triple, quadruple, or even more numerous (9—14). Hence there are four sorts of fruit-branches. The first, which has single eyes, usually a flower-bud, is long and slender, and is terminated by a pushing-eye or growing-point. It is shown in fig. 1. The terminal pushing-bud is seen at *a*; all the buds, *b*, are single and flower-buds. Sometimes it has also at its base another wood-bud, *a*; and when this is the case, the shoot is considered well constituted. These wood buds are found more especially on the under side, and at the base of wood-branches, particularly in aspects not much exposed to the sun.

79. The second (fig. 2) has double eyes, *c*: the one, *a*, a wood-bud; the other a flower-bud.

80. The third (fig. 3) has triple eyes, *d*; two of them flower-buds, and a wood-bud, *a*, between them.

81. The fourth, the length of which varies from an inch and a quarter to about three inches, forms a little spur, which in growing displays a small cluster or bouquet, composed of four flower-buds, and sometimes more (fig. 4, 5, *g*), in the midst of which is a pushing-eye, *a*. This kind is a fruit-branch properly so-called, for it produces with greater certainty the finest fruits. It is only found on well-established trees, and generally on the old wood. It appears to be the result of a wood-bud being prevented by the scarcity of sap from becoming a shoot. A deficiency in the flow of sap converts nearly all the wood-buds into flower-buds. (See fig. 5.) We call it *cochonnet* at Montreuil, and in other localities it receives the names of *branche à bouquet* and of *bouquet de mai*.

82. It must be understood that well-constituted fruit-branches have always wood-buds close to their bases. It is these eyes that afford the means of forming replacing or successional branches, the importance of which will be explained in pointing out the proceedings by which their development is induced.

83. The fruit-branches almost invariably push as many shoots as they have eyes. Whence it follows, that, with this natural disposition, a tree would very soon have nothing but fruit-branches, the terminal of which would be the only wood-bud. Shoots having no wood-buds on their lower parts, and which, consequently, can not be properly shortened, would elongate more or less; but all below each year's terminal shoot would become entirely naked branches, ultimately bearing only at their extremities a small wood-shoot. Besides the disagreeable appearance which a Peach tree in that state would present, its produce would be small, and its life would be shortened. We must, therefore, prevent such bad consequences by judicious pruning.

84. This consists in operating so as to cause the sap to flow with greater force into

the lower part of each fruit-branch, in order that the eyes there situated, and more especially the lowest one, may not die off in consequence of the sap being drawn up to the top of the branch. Such might be the case if the shoot were left entire; and it might likewise occur even if pruned, if we did not watch the growth of the terminal and of all the wood-buds situated above the one nearest to its base, so that the development of the latter, which is most important, may not be arrested. The whole art, then, in pruning the fruit-bearing shoots, consists in encouraging the eyes at their bases, in order that they may be in a state to develop themselves. To attain this, every fruit-shoot is pruned, for the first time, to a length proportionate to its strength, and to the place it occupies; that is to say, as many fruit-buds are left on it as it can support without being exhausted. The cut is made above and near to a pushing-eye, which becomes the terminal. The effect of all pruning being to improve the parts beneath, all the wood-buds and fruit-buds that are allowed to remain, uniformly open. The growth of the young shoots is conducted so as to always encourage that of the lowest one; all those that are useless are pruned off, and we check, by pinching, if

they are growing too luxuriantly, those intended to be preserved; and lastly, the shoot which has been selected to become, at the following pruning, the successional one, is maintained in a proper degree of vigor.

85. The following year the whole of the former year's fruit-branch is cut off above the shoot encouraged at its base, which now becomes a fruit-branch, bearing fruit in its turn; and is pruned so as to encourage, as before said, the development of one or two shoots at its base, one of which is to become its successional shoot. The same operation is performed year after year. For the better understanding of this see fig. 9. The branch A, at first pruned at *c*, has borne two fruits at *o, o*, and has made the shoot seen from *c* to A; at the same time it has produced the shoot B, which has now become a successional fruit-branch; and with this view the branch A is pruned at *d*, immediately above the insertion of the old fruit-branch, and this successional shoot at *o*, above the double eye *i*, which will bear fruit, as well as the two single eyes lower down the shoot, viz., *k, l*. At *m* and *n* are seen two wood-eyes, one or other of which, in growing, will supply the successional shoot in the following year.

86. Such is the general principle, the object of which is to concentrate the sap in the lower eyes, and thus prevent them from dying off; for, in that case, we would be obliged to cut off the branch that had fruited, as it only wastes the sap, without hav-

ing, at the same time, any means of replacing the said branch; and thus a gap would be produced at the place it occupied. Nevertheless, this too absolute principle must receive some modifications which will be adverted to when explaining the rules applicable to each of the four sorts of fruit-branches which exist on the Peach tree.



Fig. 9.

87. FIRST SORT.—*Fruit-branches with Single Eyes* (fig. 1.) This sort is the worst and especially so when, as frequently happens, there is no wood-eye at its base, from which we might hope to obtain a successional shoot. When this is the case, the generality of good cultivators are of opinion that it should be cut out. I am only of that opinion when it is not required for covering the branch, but when it serves to fill up a blank it should be preserved. It is left entire, because it possesses no wood-buds except the terminal one; and this, by drawing the sap towards it, allows of the setting of two or three fruits, which may be left upon it, taking care to pinch off the superabundant flower-buds. It must be nailed so as to give it as much liberty as possible, in order that it may gain strength; and when its terminal shoot has grown sufficiently to establish the flow of sap, its herbaceous extremity is pinched off with the view of concentrating the sap, and exciting it to seek a fresh outlet. By this means we can sometimes cause a wood-eye to spring from the lower part of such a branch. Should this take place, we have then a successional shoot to which the branch can be cut back at the summer-pruning if its fruits have dropped; or after they have been gathered, if they hold on.

88. If however this eye, of such great importance, be not formed, and it be impossible to suppress the

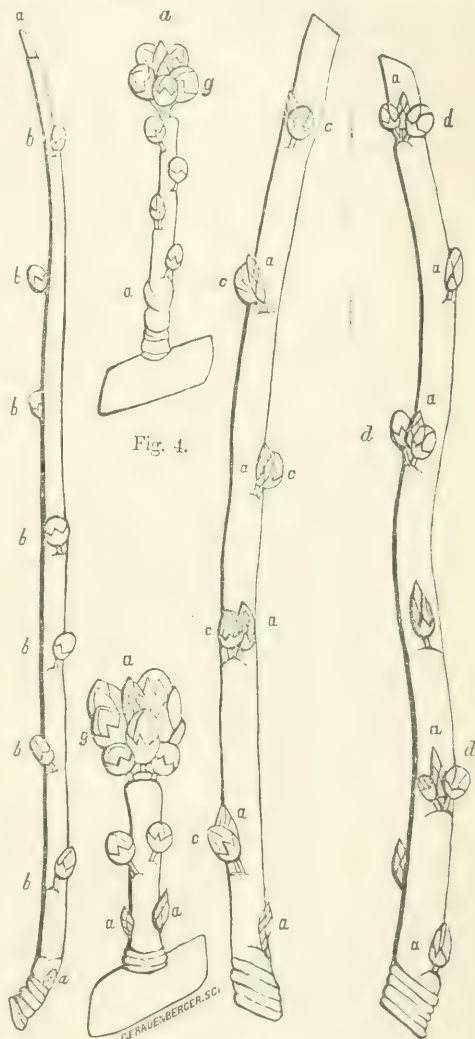


Fig. 1.

Fig. 5.

Fig. 2.

Fig. 3.

branch without occasioning an ugly blank, it must then be preserved till the next pruning, cutting it back to the wood-bud nearest to the old wood, in order to again try, by checking the flow of sap, to produce a wood-bud still lower. If this were formed it would be needful to cut down on it immediately, if one or two fruits do not make it worth while to retard the operation till after they are gathered. At the same time the young shoot above must be checked by pinching, so that the one



recently sprung from beneath run no risk of being impoverished. This mode of treatment is so much the more important in consequence of this kind of branches existing more especially on the lower parts of the tree, toward which we must lose no opportunity of inducing the flow of sap, which has always a comparatively strong upward tendency.

89. **SECOND SORT.**—*Branches with Double Eyes* (fig. 2); and **THIRD SORT.**—*Branches with Triple Eyes* (fig. 3). These two kinds of branches, which are the most common on Peach trees, are both pruned in the same manner. The branch which has fruited is cut down to the successional shoot; and the latter is pruned on a wood-bud, leaving it long enough to have a sufficient number of flowers. The shortening is made with the view of leaving on each bearing-branch only as many fruits as it can support without weakening itself, and also with that of concentrating the sap so as to favor the development of the buds, or young shoots at or near the base, one of which becomes in turn a successional shoot at the following pruning.

90. In these, as in the preceding sort, it may happen that a fruit-branch, pruned the year before on a single wood-bud, may not have produced others at its base during the time of its growth. It must then be cut back to the wood-bud nearest to where it was pruned before. If a lower eye does push, it must be treated as directed (88).

91. The fruit-branches on the upper side generally become of a greater length than those on the under side, which tends to cause more difficulty in getting buds to push near the base. In this case, after having been pruned sufficiently long to preserve the fruits, they are trained as will be shown at 93. If an eye form at the base of any of them, it is well to encourage its growth by pinching and cutting off, or disbudding, all the young shoots above it, at the summer pruning. Without the precaution of pinching and disbudding, the upper shoots would absorb the sap, and the lowest one would become so impoverished as to be destitute of eyes at its base, and we should then be obliged to replace with a better constituted young shoot, further situated however from the main branch.

92. *The Flower-buds*, on shoots from the upper sides of the branches, are very often found at a considerable distance from the base; and we are consequently obliged to leave the shoots much longer than would otherwise be proper, in order to have fruit. There is no objection to this, only it is advisable to take out the wood-eyes that are beneath the lowest flower-bud, with the exception, it must be well recollected, of at least two of the nearest to the base of the shoot. In this way there is no opposition to the development of the latter, either of which may replace the fruit-branch at the following pruning.

93. I have spoken of a particular mode of nailing a branch without a developed eye at its base so as to make it produce one, that being indispensable for the formation of a replacing shoot. It is done in the following way:—As soon as a fruit-branch of this description is pruned, it is nailed in winter to the wall, bringing it as close as we can, without breaking, to the branch on which it grows. It is well-known that every fruit-branch forms with the branch that bears it an angle more or less open; we must endeavor in this case to render the angle as acute as possible, and the

extraordinary bend imposed on its lower parts, by this mode of nailing, compresses strongly the woody fibres of the base, and stretches the bark on the outside of the curve. The sap attempting to effect a passage through its proper vessels, which are now closely squeezed together, often breaks through the bark and pushes the eye desired. This proceeding is, however, only applicable to branches one or two years old.

94. It is not absolutely necessary to wait till the usual time of pruning to cut back to their successional shoots those branches retained as fruiting-branches at the winter-pruning. There is always an advantage in doing so whenever we can, excepting when the successional is growing too vigorously, notwithstanding our endeavors to check it by close nailing and pinching off. During the summer-pruning, if we have time, we cut off all the branches on which the fruit has not set permanently; and, in general, it is well, after the fall of the leaves, to cut out all the useless wood; this leaves so much less to be done at the regular winter-pruning. By cutting off at this time the greater part of the branches that have borne fruit, we strengthen their successional shoots, and render available for the latter the portion of sap which the parts cut off would have appropriated: and there is always an advantage in not allowing the tree to nourish useless productions. This attention is especially necessary for the weaker branches. Unfortunately, the cultivators and gardeners who have large gardens under their charge are, on account of their many occupations, unable to perform these various operations, which, although useful, are not absolutely indispensable.

95. *FOURTH SORT.—Fruit-branches, the Buds of which consist of four or more Flower-buds.* It is called at Montreuil, *cochonnet* or *bouquet de mai* (Figs. 4, 5.) This sort of fruit-branch, or spur, being only one and a quarter to three inches in length, and most frequently forming a cluster (Fig. 5,) with a single pushing eye in the midst, which suffices for drawing nourishment to the fruits, ought not therefore to be shortened. It is preserved, wherever it may be, in order to produce fruit. As it forms almost exclusively on the old wood, we often find it in front of the principal branches; and when thus situated, it must necessarily be cut off after the fruit is gathered. With regard to those on the sides, they are then pruned to the lowest wood-bud; if there be none formed, and that the spur may still be useful, it is pruned to the wood-bud formed on the last summer's shoot pushed by the terminal eye. We must endeavor, as much as possible, to retain one or two flowers beneath this pruning. As soon as the operation is performed, the branch is nailed, as was said at 93; and sometimes a wood-bud, capable of replacing it at the following pruning, is produced at its base. When they have eyes at their bases they are properly constituted, and are pruned as directed at 89.

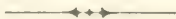
96. Although I have hitherto, in conformity with the old belief, directed the fruit-branches always to be pruned on a wood-bud which was judged necessary to preserve a good state of vegetation, yet I am now able to affirm that a terminal wood-bud is not absolutely necessary for the growth and maturity of the fruit. Whence it follows, that under certain circumstances, such as the necessity of prolonging a fruit-branch to a great length, in order to obtain a wood-bud, which after all is too high up, I

prune above a flower-bud, without any bad consequences, provided that the base of the branch is sufficiently vigorous.

97. The tree must be completely unnailed before pruning, lest some of the branches be split or broken during the operation. The walls and trellises are inspected, the insects destroyed, and the whole made as clean as possible. The tree must not be unnailed till we are ready to begin pruning; and the principal branches must be trained in, and secured immediately after the operation is completed, lest they suffer from the effects of severe frosts, which often occur at that time of the year.

98. In pruning, I always commence with the fruit-branches, going along the principal branches, beginning with the highest of these and working downwards. This method has the advantage of enabling us to judge better of the strength of the upper fruit-branches, and of rendering it easier to balance them with those that are on the under side and at the bases of the principal branches, the fruit-branches growing there being always less vigorous than those on the upper sides and extremities.

After each fruit-branch has been pruned according to the principles I have laid down, I train in the principal branches of the tree, inclining each in the way it should go, and then only do I prune their extremities. By this mode of proceeding it is easier to judge of their relative length and strength, so as to act accordingly.



## A SCORE OF NEW PEARS.

BY HON. M. P. WILDER, PRESIDENT OF THE AMERICAN POMOLOGICAL SOCIETY.

[A YEAR ago we had the pleasure of presenting, from the pen of Col. WILDER, a valuable chapter on "New Pears that promise well." He has again very kindly yielded to our request, and favored us with the following outlines and accurate pomological descriptions of twenty select new, or recently introduced varieties. It is unnecessary for us to say that the information imparted in this paper is of great value to nursery-men, as well as to amateur cultivators, who feel particularly interested in Pear culture, and are making up large collections. Those only who have actual experience, can appreciate the amount of labor and expense involved in conducting such immense experiments as those from which Col. WILDER has gleaned the results now so liberally communicated. We must take this occasion to express the hope that this year will be a busy one among fruit growers, in all parts of the country, in collecting facts for the great Pomological Convention, to be held in Boston next autumn. Of this we shall have more to say hereafter.]—Ed.

**BIERRE NANTAIS.**—Size—large. Form—pyriform, slightly contracted in the neck somewhat obtuse. Stem—rather stout, about one inch in length. Color—a clear green until mature, when the skin assumes a pale, handsome yellow, generally without any blush, and with but few traces of russet. Flesh—melting, tender, and juicy. Flavor—sacharine, tolerably rich. Season—September 15th to October 15th. Quality





BEURRE NANTAIS.

BEURRE BACHELIER.

*"very good."* Tree—grows well, on both Pear and Quince; comes early into bearing, and makes a fine, pyramidal tree. Mr. LEROY advertises this as a new variety, but it has long been known in other collections.

BEURRE BACHELIER.—Size—extra large. Form—obovate, obtuse-pyriform. Stem—short, stout, seldom more than three-fourths of an inch in length, planted in a narrow, folded depression. Color—clear green, but at maturity has a handsome, yellow skin; smooth, and with but few traces of russet. Flesh—tolerably melting, and juicy. Flavor—pleasant, inclining to sweet, not high, but agreeable. Season—November to December; keeps well. Quality—*"good,"* and will probably prove, on further trial, *"very good."* The *Beurre Bachelier* is described as a Pear of the largest class. On the Quince root it is tardy in growth, but succeeds well on its own



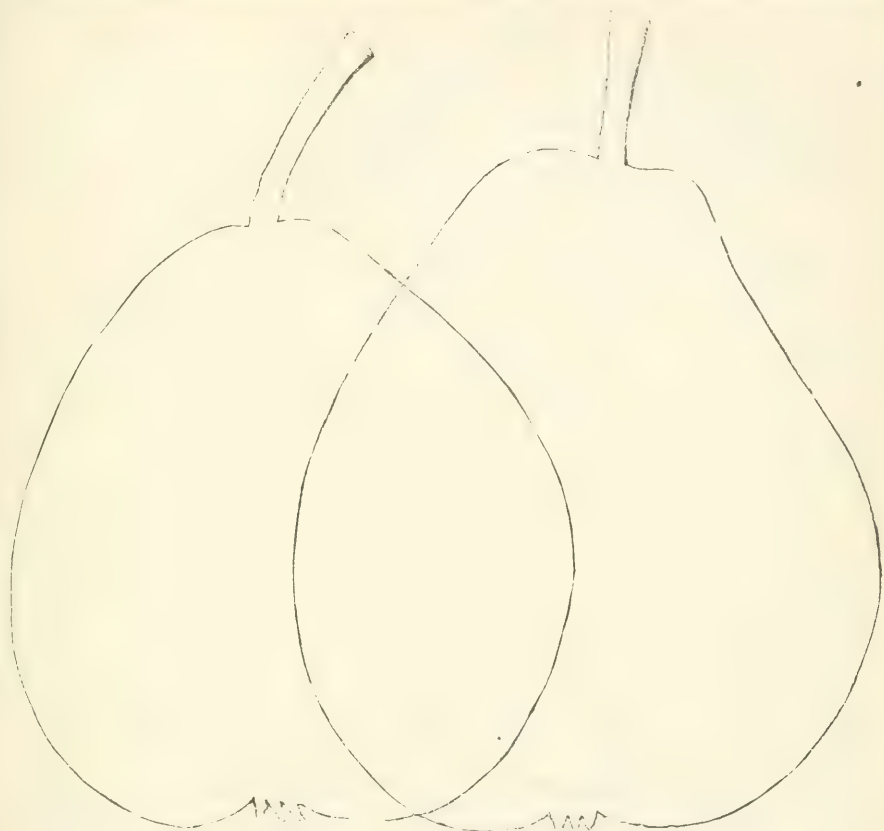
ZEPHURIN GREGOIRE.

LOUISE DE PRUSSE.

root, and bears abundantly; a single graft, of one foot in length, having produced, the past season, nine Pears.

**ZEPHURIN GREGOIRE.**—Size—medium. Form—acute-pyriform, inclining to turbinate; full in the neck. Calyx—slightly sunk. Stem—one inch, or more, long; set on the apex of the fruit, and frequently surrounded with a fleshy protuberance. Color—dull yellowish-green, slightly marked with russet, and stippled with coarse dots. Flesh—very juicy, melting, and buttery. Flavor—sweet, delicious, with peculiar, rich aroma, not inferior to the *Belle Lucrative*. Season—November. Tree—hardy, and very productive; the fruit being borne in clusters.

**LOUISE DE PRUSSE.**—Size—medium, or above. Form—roundish-ovate, resembling in appearance the *Belle Lucrative*. Calyx—small, sunk in irregular cavity, tolerably deep. Stem—stout, generally less than an inch in length, inserted without depression. Color—dull green, becoming of a golden hue at maturity; a little obscured with russet spots, and frequently touched with red on the sunny side. Flesh—white, melting, buttery, and juicy. Flavor—rich, subacid, nearly sweet, with an



BEURRE NAVEZ.

THEODORE VAN MONS.

agreeable perfume. Season—October to November. Quality—“*very good*.” Tree—upright in growth, forming a fine, bushy pyramid, and succeeds well either on the Pear or Quince.

BEURRE NAVEZ.—Size—large. Form—roundish-turbinate. Stem—About one inch in length, inserted in slight cavity. Calyx—open, set in moderately deep basin. Color—clear green, becoming yellowish when ripe, dappled with russet, and brown on the sunny side. Flesh—melting and buttery, with sufficient juice. Flavor—very rich, subacid, with a fine aroma. Season—October to November. Quality—“*very good*,” superior. Tree—succeeds well on Quince root.

THEODORE VAN MONS.—Size—large. Form—obovate, obtuse-pyriform. Calyx—large, open; segments broad, expanded, set nearly on the apex of the fruit. Stem—about one inch in length, inserted in slight depression. Color—clear green, with traces of russet, becoming a handsome yellow at maturity. Flesh—tender, melting, and juicy. Flavor—pleasant, sweetish, with some aroma. Season—October to November. Quality—“*good* ;” probably “*very good*.” Tree—vigorous, soon forming a





LAURE DE GLYMES.

FONDANTE DES PRES.

fine pyramid. Produces abundantly on the Pear or Quince stock, and promises to become a hardy, valuable fruit.

**LAURE DE GLYMES.**—Size—full medium. Form—oval-turbinate, three inches in height by two and a half inches in diameter. Calyx—open, moderately sunk. Stem—short, less than one inch in length, tolerably stout, inserted without depression in a fleshy base. Color—orange-russet, on a dull yellow ground. Skin—handsome. Flesh—white, melting, and tender; not very juicy. Flavor—sweetish, with pleasant aroma. Season—October to November. Quality—“good;” hardy and prolific; bearing in clusters; valuable for the orchard. M. ALEXANDER BIVORT describes the above variety, in the *Album de Pomologie*, as being of *exquisite* quality. Our specimens would not bear so high a classification. It may, however, prove “very good.”

**FONDANTE DES PRES.**—Size—medium. Form—turbinate, inclining to pyriform; quite broad across the middle. Stem—one inch in length, set obliquely in a narrow-folded cavity, resembling at its junction the *Passe Colmar*, from which it was raised. Color—dull green, becoming, when ripe, clear lemon-yellow, red on the sunny side, coarsely stippled, and slightly spotted with russet. Flesh—white, melting, and juicy. Flavor—sweetish, agreeable, with considerable aroma. Quality—“very good.” Season



BEURRE SOULANGE.

ALEXANDRE LAMBRE.

October to November. This is one of Professor VAN MONS' seedlings. It does not appear to set its fruit so readily on the Pear as on the Quince root.

BEURRE SOULANGE.—Size—medium to large. Form—acute-pyriform. Stem—one inch in length, stout, curved, fleshy at the junction. Color—pale yellow at maturity, with occasional traces of russet. Flesh—melting and very juicy. Flavor—rich, sugary, with peculiarly pleasant aroma. Season—October to November. Quality—“*very good*,” will probably be classed as “*best*.” A desirable acquisition; imported from Brussels many years since, and of doubtful nomenclature.

ALEXANDRE LAMBRE.—Size—medium. Form—roundish, *Bergamot* shape. Calyx—moderately sunk in flat basin. Stem—rather stout, less than one inch in length, and generally inserted without depression. Color—yellowish-green, occasionally marbled with red on the sunny side, russeted at the stem and calyx, coarsely stippled. Flesh—greenish-white, very melting and juicy. Flavor—sweet and rich, with *Passe Colmar* aroma. Core—small. Seeds—numerous, plump, and acutely pointed. Season—November to December. Quality—“*very good*,” probably “*best*.” Tree—prolific and hardy on the Pear stock; not yet proved on the Quince.

DE SORLUS.—Size—large. Form—obtuse-pyriform, inclining to ovate. Stem—



DE SORLUS.

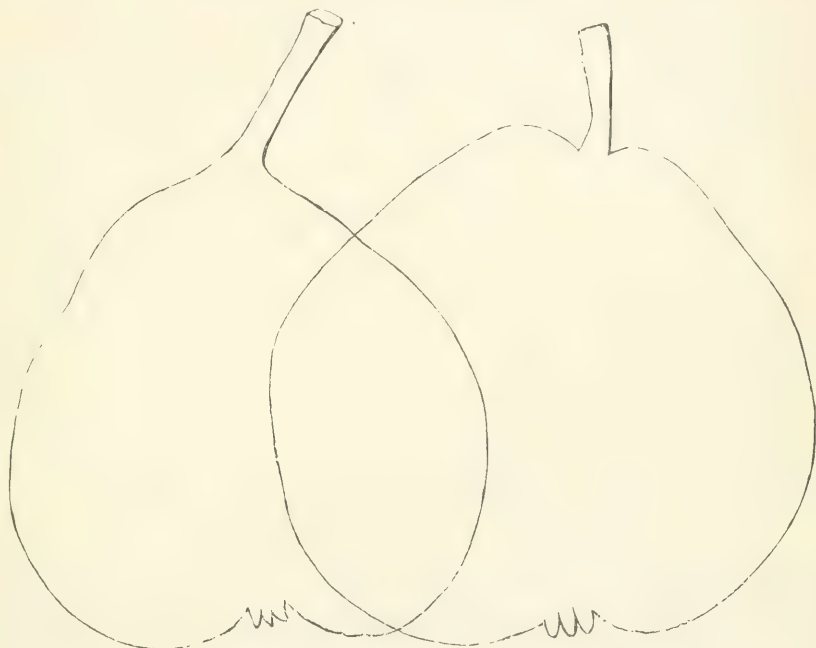
COMTE DE FLANDRE.

about one inch in length, planted in a slight depression. Color—light green, becoming yellow at maturity; russeted at the calyx and stem, with some traces on the body. Flesh—white, half-melting, tolerably juicy. Flavor—pleasant, but wants richness and character. Season—November to December. Quality—not yet ascertained; probably “good.” Tree—of fine pyramidal habit, bearing well both on the Pear and Quince root. M. BIVORT describes the *De Sorlus* as of first quality in Belgium.

COMTE DE FLANDRE.—Size—large. Form—pyramidal-pyriform, contracted in the neck, and broad at the middle, resembling the *Marie Louise*. Stem—stout, joined to the fruit with fleshy base, one to one and a quarter inches long, set without depression. Calyx—closed, moderately sunk. Color—yellowish-green, becoming quite



yellow at maturity, considerably dappled with russet, and occasionally marbled with red on the sunny side. Flesh—melting and juicy. Flavor—rich, subacid, inclining to sweet, with an agreeable aroma. Quality—“*very good*.” Season—November to December. Tree—Vigorous, and very prolific. A seedling of Dr. VAN MONS, which fruited for the first time in 1843, under No. 2,672.



FONDANTE AGREEABLE.

MALCONAIRE D'HASPIN.

**FONDANTE AGREEABLE.**—Size—medium. Form—roundish, obovate. Stem—one inch in length, planted on one side, and fleshy at the junction with the fruit. Calyx—open, in broad, shallow basin. Color—dull yellowish-green, slightly russeted. Flesh—tender, juicy, and melting. Flavor—very pleasant and refreshing, with delicate aroma. Quality—“*very good*,” excellent. Season—last of August. Core—large. Seeds—large, plump.

**MALCONAIRE D'HASPIN.**—Size—large. Form—roundish-obovate. Stem—about one inch in length, inserted in slight depression. Calyx—closed, set in rather deep, irregular basin. Color—yellow, with reddish cheek, russeted at calyx, and stippled with coarse dots. Flesh—melting, juicy, and tender. Flavor—rich subacid, perfumed. Season—October to November. Core—medium size. Seeds—small. Quality—“*very good*.” Tree—vigorous, hardy, and productive. A valuable market Pear, received some years since from Paris, but is not now known in the French Catalogues.

**VAN MONS, 1825.**—Size—full medium. Form—obovate, obtuse-pyriform. Stem—rather stout, one inch in length, or more, planted in slight cavity. Calyx—closed,



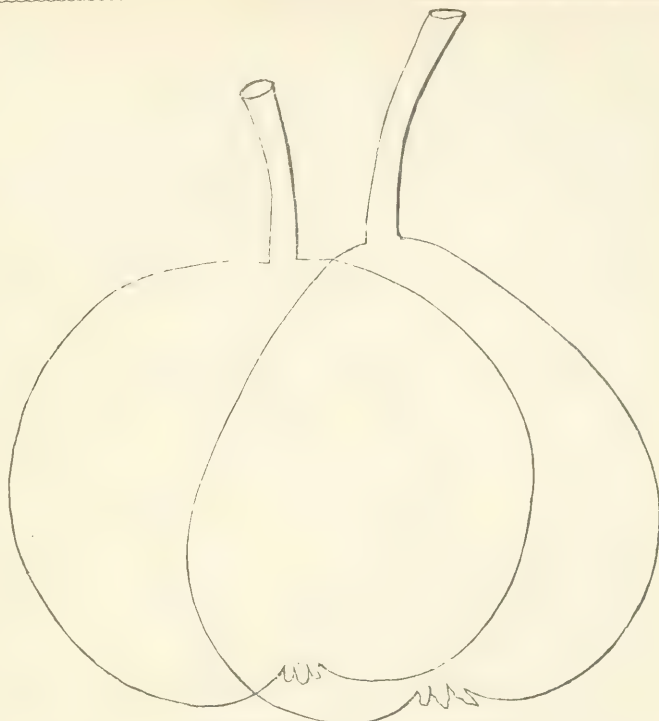
VAN MONS 1825.

POIRE D'AVRIL.

rather deeply sunk. Skin—pale yellow at maturity, with a few russet traces, and occasionally a red cheek. Flesh—melting, juicy, and tender. Flavor—pleasant, sub-acid, and rich. Season—October to November. Quality—"very good," if not "best." Tree—a healthy, good grower; much of the habit of the *Urbaniste*, which it resembles, both in foliage and fruit, but is clearly a distinct sort.

POIRE D'AVRIL.—Size—medium. Form—acute-pyriform, or turbinate. Calyx—closed, set in rather broad basin, moderately sunk. Color—yellowish-green, sometimes with reddened cheek, and a little russeted in spots. Flesh—greenish-white, breaking, and juicy. Flavor—resembling *Easter Beurre*, but much inferior in richness. Season—February to April; keeps well and appears to ripen without difficulty. Core—small. Seeds—long, and pointed. Mr. RIVERS, the English cultivator, classes this variety among the Cooking Pears. Further trial may class it among the late dessert fruits, of medium quality.

DOYENNE ROBIN.—Size—medium. Form—roundish, *Bergamot* shape. Stem—rather long, planted without depression on a flattened surface. Calyx—small, moderately sunk. Color—pale lemon-yellow, russeted at the stem and calyx, and profusely stippled with coarse dots. Flesh—white, fine, melting and juicy. Flavor—sprightly, vinous, with pleasant astringency, like *Doyenne d'Ete*, rich and good. Quality—"very good." Core—medium size. Seeds—plump and fair. Season—Oct. 1st.



DOYENNE ROBIN.

DE BAVAY.

DE BAVAY.—Size—medium. Form—turbinate. Stem—long; one and a fourth inches, or more, in length; planted without depression. Calyx—large, open. Color—dull yellow, coarsely stippled, and considerably traced with russet. Flesh—juicy, tolerably melting. Flavor—an agreeable subacid, pretty rich. Quality—“*very good*.” Season—October to November.

MILLOT DE NANCY.—Size—medium, or below. Form—pyramidal-pyriform, narrowed in the neck. Stem—one inch in length, inserted without depression in folds, like the *Passe Colmar*, which it resembles. Color—dull yellow, ground overspread with orange-russet. Skin—handsome, sometimes reddened next the sun. Flesh—buttery and melting; not very juicy. Flavor—tolerably rich, sweetish, with peculiar and pleasant aroma. Season—October to November. Quality—“*good* ;” promises to be “*very good*.” Tree—vigorous, and succeeds on the Quince. This is No. 2,670 of Dr. VAN MONS’ collection.

POCAHONTAS.—Size—medium. Form—variable, obovate-pyriform inclining to ovate. Calix—small, closed, moderately sunk. Stem—short, about three-fourths of an inch long, inserted without depression. Color—lemon-yellow, partially covered with thin traces of russet, particularly at the stem and calyx; occasionally with bright vermillion cheek. Flesh—white, melting, juicy, and buttery. Flavor—sweetish, rich, with pleasant musky aroma. Core—small. Seeds—few, frequently abor-





MILLOT DE NANCY

POCAHONTAS.

tive. Season—October 1st to 15th. Quality—"very good." A beautiful variety. Origin.—Quincy, Massachusetts.

P. S.—Among the modern *forciga* varieties, which have fully sustained their reputation, and may now be considered as valuable for general cultivation, are the following :

BEURRE D'ANJOU.—No Pear, of recent introduction, is destined to take a higher rank. Always fair, large, and delicious.

BEURRE STIERKMAN.—One of the best acquisitions, of late years ; and will occupy a place beside the *Urbaniste*, *Flemish Beauty*, and other fine autumn Pears.

BEURRE SUPERFIN.—A superior fruit, in every respect ; and in flavor and texture equal to the best *Brown Beurre*.

NOUVEAU POITEAU.—As a thrifty and prolific tree, either on Pear or Quince root, this variety cannot be surpassed ; uniformly bearing abundant crops of large, fine fruit.

FONDANTE DE MALINES.—This fruit improves every year, upon acquaintance, and, the past season, has been particularly large, handsome, and excellent.

GRAND SOLIEL.—Hardy, very productive, and high flavored. Valuable.

BEURRE CLAIRGEAU.—This celebrated variety will produce quite an excitement among fruit growers, on account of its size, productiveness, and beauty. It is a fine grower, and succeeds on both Pear and Quince root.

The following *American* varieties are uniformly hardy, productive, and excellent in quality; all well adapted to orchard cultivation: *Howell*, *Sheldon*, *Dallas*, *Collins*, *Wadleigh*, *Meriam*, *Kingsessing*.

The *Lawrence* will, ere long, be universally esteemed as one of the best winter Pears; invariably rich and delicious, keeping to the present time, without difficulty.

The *Beurre d'Arenberg* still stands, with me, at the head of the list of late sorts; uniformly ripening in perfection, and with little care. On standard trees, with high cultivation, this variety will probably never be surpassed.

In closing this chapter, which has already been extended beyond my original intention, I subjoin a list of a few other sorts, which have come into a bearing state the last year. None of these have borne before, and now only on imported trees; but, from appearances, some of them will probably command especial favor.

PIE IX.—A large pyramidal, or turbinate, high-flavored, buttery Pear; ripe the first of October.

COMTE DE PARIS.—A large, obtuse-pyriform fruit; handsome and prolific. October.

CORNELIS.—Large, pyriform; excellent. September.

WILLERMOZ.—Above medium size, handsome and good. Ripe middle of October.

RETOUR DE ROME.—A russet Pear, of good size and excellent quality. November.

EMILE D'HEYST.—Large, form of the *Dix*; very melting and juicy. October.

BEURRE BERCKMANS.—Regular pear-form; second size; first order. December.

MONSEIGNEUR AFFRE.—Middle size; a rich, melting Pear. November.

MARQUIS DE BEDMAR.—Second size; *Bergamot* shape; fine quality. October.

MADAME ELIZA.—Large and handsome; a late fruit, of good promise. November

## GRAPES AND GRAPE CULTURE.

BY WM. CHORLTON, GARDENER TO J. C. GREEN, NEW BRIGHTON, STATEN ISLAND.

IF we were all to take the same course that your correspondent, Mr. MESSER, has done, viz., give our experience at the end of each season, through the pages of the *Horticulturist*, there might be collected an amount of information which would be very valuable in a collective form. Taking this view of the subject, allow me to follow in his wake by recording my own progress the last year; and as the cold grapery is his main point, I will confine myself for the present to the same consideration.

The house at this place has not had any artificial heat, and has given satisfaction, notwithstanding the wet summer and the more than usual tendency to mildew. The total number of bunches ripened off were 918. The first ripe, out of a collection of over twenty kinds, were *Muscat Blanc Hatif*, *Malvasia*, and *Royal Chasselas*, and were cut in good condition on the 2d of August. Other sorts were ripe as follows: *White Frontignan*, 10th Aug.; *Gromier du Cantal*, 16th; *Black Frontignan*, 27th; *Austrian Muscat* and *Black Hamburgh*, 10th Sept.; *Muscat of Alexandria*, 12th; and others later, according to habit. The vines were uncovered on the 1st of March,

and from the 19th to 26th May continued to open their blossoms. About the middle of July we had a succession of damp and foggy weather, with the wind prevailing south and southeast, when mildew began to show itself. The house was then dried off; no more water was applied inside, as the weather continued damp and the grapes were ripening. Air was admitted above more abundantly, but with caution, and the floor sprinkled over with sulphur; after which, for three or four days, the heat was allowed to rise to 110° in the middle of the day. What little mildew could be found was cleared off, and not much appeared afterwards. I mention this more particularly as the above pest has the past season been more than usually prolific in this neighborhood, and as I feel further convinced that this is the best method of getting rid of it.

Mr. MESSER says, with respect to his own house, that "if there had been no forcing in the spring, the *Hamburgs*, *Muscats*, and *Frontignans* would have been worthless;" and that in his neighbor's, many clusters of the *Purple Frontignans* decayed prematurely. This has not been the case here; for out of the number above stated there were only some seven or eight bunches which shrivelled, and those were *Muscat Blanc Hatif* and *Royal Chasselas*, the former of which only cracked a few berries the past season, although it is very apt to do so. The last Grapes were cut in good order on the 18th November, viz., *West's St. Peter's*, *Reine de Nice*, *Syrian*, and *Palestine*; and these would have hung longer, but were wanted for use.

This house was planted in March, 1850, and contains 74 vines. In 1851 there were cut 262 bunches; in 1852, 618 bunches; and last year, 918 bunches;—making a total of 1798 bunches. The vines have made healthy, strong, and well-ripened wood, with plump, prominent eyes, for next season, and are, if anything, in better order than heretofore; and this without the aid of "dead carcasses," which your correspondent, Mr. McKAY, is so much in love with.

Facts are stubborn things, 'tis said, and both Mr. McKAY and Mr. CLEVELAND seem disposed to give this position to the public. Now, it is just possible both have failed to support the principle for which they are contending. I do not think that any man of experience will deny that the latter gentleman's old horse did make a quantity of rich material, and that in this well-rotted state his vine roots did luxuriate therein; and that the former's eighty head of cattle did contribute somewhat toward the rapid growth of his *Isabellas*, by being buried so deep; and that the gassous matter evolved therefrom distributed itself among the superincumbent stratum, which had been well worked and loosened up, and which it is presumed was something of a "maiden" earth, therefore just in the state to absorb and retain such—like a dog with an empty stomach, it wanted something organic;—and that afterwards, when the whole was thoroughly decayed, the roots were found in abundance among the bones, and what would be black mold, rich in organic ingredients. But how far does either example go to prove the advantage of using these same substances in a fresh state, and in the wholesale quantities, along with or even under other rich material in a vine border, to such an extent as sometimes is done, and until the whole mass is glutted until it is one mass of putrefaction. If we are driven to facts, let us abide by them. Therefore, has Mr. CLEVELAND, with the *carcasses* which he used in making his borders, produced



anything extraordinary; or has he even obtained as much, of better quality, in the same time, and with his vines in any better order for futurity, than I have recorded above, and this without any such nuisance. He speaks of the great number of premiums that have been awarded to him; but is it that he has produced something very wonderful from time to time, or is it rather because he has not had much superiority to contend against. In a former article, (*Horticulturist*, 1852, p. 110,) he says that his "vines were not allowed to bear a bunch till the fourth year after planting," and that at the end of eight years he has "never been able to ripen perfectly more than nine or ten bunches on any single vine." Now this does not argue much for the benefit to be derived from such material as he advocates.

With regard to Mr. McKAY's example, he jumps at a conclusion rather too fast, without having proved much in favor of the argument. In the first place he has a gravelly bottom—the one above all others most suited to the Grape vine, as admitting of good drainage; his soil is particularly well worked, with some manure added where the roots could take hold of it, which would enable the vines to luxuriate finely for a length of time, until the fleshy part of his *oxen* was all decayed into mold; and as all the lumps only covered a part of the whole area, the superabundant water could drain away, and with his good culture the soil would remain porous; therefore the gases would be taken up by his *fresh base soil*, which would render it more fertile. This is a very different circumstance to what is advocated with respect to vine borders; and when Mr. McKAY has seen as much mischief done as I have, by the use of these materials, he will not be so sanguine about fresh carrion. I do not deny the good properties of animal manures, when thoroughly decomposed, and in reasonable quantity, but do protest against gorging the ground with them in a fresh state; for no root can exist in contact with such matter: and as barn-yard manure will answer the same purpose, and is generally much more convenient and cheap, where is the advantage?

With respect to the cultivation of hardy Grapes, there is no doubt but what if the same attention were bestowed on them as there is on the exotic, they would be equal in luxuriance to the latter, and might be made to produce fruit of far better quality than is generally seen; and your correspondent in this instance has only shown what good culture will do: and further, if he will use good barn-yard manure freely, *with the same good tillage* which he has heretofore practiced, I am very much mistaken if, after a "patient trial," he will not then admit that it is not so indispensably requisite to use dead oxen or any other animal flesh.

The presumption respecting the cure of mildew by cutting off the top roots, is so devoid of physiological fact, and so opposed to experience and observation, that I must own my incompetency to understand it. Is it not more likely that the healthiness of his vines wards it off, as there are plenty of examples to prove this probability?

## Reviews.

THE AMERICAN HAND-BOOK OF ORNAMENTAL TREES. By THOS. MEEHAN, Gardener. Philadelphia, 1853.

WE always welcome every new contribution to the "literature of trees." It happens more frequently than otherwise, that the planter who becomes the proprietor of a new place knows nothing of the business he undertakes in attempting to lay the foundation of an ornamental lawn or garden. Why this is so, we shall not stop to inquire; but we know that when ninety-nine out of a hundred citizens are placed suddenly in an arboretum, they are unable to distinguish the beautiful, or to classify the objects around them; nor would any of these ninety-nine be qualified to undertake, even with the advice of books, the selection of trees for their own grounds. Unfortunately, it is these very citizens who most frequently become possessed of the means which are an essential part of the process. The determination to plant is followed by the purchase of books. These are read, too, but not understandingly. If a competent gardener is employed to give his advice and assistance, the probabilities will be that he is interfered with. The difficulties inseparable from procuring the variety necessary, and the hurry with which it must be done, with the too late discovery that much more than was expected has been expended on the dwelling and its numerous alterations and added conveniences, deter the cit in pursuit of a *rus in urbe* from doing half he should do in the way of ornamental planting. The result is a miserable failure: handsome furniture, and miserable trees; a showy equipage, and no underdraining; elegant dinner parties, and no variety of out-door objects; a show of plate and china, and not a single plant to satisfy the botanist. Why is this? In the first place, want of knowledge in the proprietor is the greatest drawback; imperfect assistance and advice is the second; the third may be set down as the difficulty of procuring from the near vicinity of the ground to be ornamented that variety which constitutes one of the elements of beauty,—for the beginner may set it down as a fact, that to collect an arboretum is as difficult a feat as to make a cabinet of shells or a museum of birds. At best it must be a work of some time, unless you choose to make a long list and forward it to the proper quarter, knowing that your purse will suffer in shortness in proportion to the length of the order. No one, however, need despair; these observations regarding the difficulties should only stimulate the beginner, who must, if he wants to have the true enjoyment such pursuits afford, give a little time at least to the study of the subject.

What book shall we recommend for this study? We candidly confess we know of no single one that will answer the purpose, though there are many that will aid the learner. Observation of the work done and the beauty accomplished by others, is of the first importance; inquiries, and visits to well-planted places, nurseries and so forth, can not be too frequent, in conjunction with study at home; botanical knowledge is useful—we do not say indispensable; and yet some kind of *love* for the topic must be at the bottom of the whole.

Mr. MEEHAN possesses the requisites for an adviser; and we know of few men to whom we would more freely confide the responsible trust of planting for us. In his book, how-

ever, he has been too brief. As gardener at the Bartram Arboretum, near Philadelphia, he has studied and observed the trees there; and subsequently at the costly greenhouses and gardens of CALEB COPE, Esq., near the same city, he has perfected his knowledge: but we can not but think his pages might have been safely enlarged; or the measurements and histories of the single trees at BARTRAM'S have been sometimes omitted, to include in the volume information of a more varied and useful kind. We should like the substratum he has turned up to be again dug over, manured, and planted thicker with more shrubs of knowledge. In short, he does not tell enough, however true it may be that what he does print is dependable. The "hand-book" should be a thorough guide. When it lands us by rail for a visit of a day to some city in Italy, it should tell us all that is essential to be known, that can be compressed into a small space. The planter is most probably in as great a hurry as the traveler: he has other things to do—his counting-house and correspondence to attend to—like the traveler, who no sooner catches a glimpse of the leaning tower of Pisa than he wants to hurry off to Florence and Rome, and to read in his coach, as he lolls as at his ease, all about what he has seen; and yet not all,—he does not care to know how many sticks or blocks compose the steeple of Strasburg Cathedral, but he does desire to read of its height and ornaments, and the lacework of its astounding stone abutments.

We have said enough to indicate the difficulties attendant on the first study of planting, and have shown that the busy merchant, in possession of more dollars than tree-knowledge, is the person who is to buy and study your "hand-book." And what should an "American hand-book of trees" be? This is a more difficult question; nor should we be able to point out the man now living who could make exactly our *beau idéal* of such a work. It will not be entirely complete, however, till it is published *annually*, with information in it as to where such and such trees are to be bought the ensuing season, in the best health, in quantities, and at the fairest price—which, be it known also, is not always the *lowest*. For instance, in our imaginary *annual* for 1854, we should like it to tell the interesting circumstance, that owing to a *mistake!* the MESSRS. PARSONS, of Flushing, Long Island, are actually the lucky possessors of more of the fine evergreens of California and Oregon, than any nurserymen in the world. They ordered seeds to be sent them from those Pacific "green-houses," and were somewhat surprised, when they came, to find them accompanied by a bill of twelve hundred dollars! Twelve hundred dollars for a box of seeds! The order had been given, the money was paid, and now for the result. They have for sale say thirty thousand thrifty specimens of *Pinus Lambertiana*, the same number of *Pinus insignis*, and numerous other rare and curious trees, from our new possessions on the Pacific, that heretofore we have been obliged to order from abroad. This is one species of information suitable to be imparted in an annual hand-book. The initiated will understand us when we say that every tree has its similar kind of history; some nurseries are overstocked with one or more kinds, and will dispose of these in quantities at a price which would be absorbed by a single specimen or so at a garden which possesses but half a dozen of the kind. And thus it is of Roses, of greenhouse plants, and of shrubs and bulbs. We could point out some who would gladly give away or exchange a few things that they possess in superabundant quantity, which might be greatly esteemed at a little distance. In this predicament will most old nurseries be found, owing to a change of fashion influencing demand, and other causes.

But enough; let us award to Mr. MEEHAN the merit of having fashioned the framework of a good "hand-book" for future enlargement—a task he is probably well qualified to undertake, and will be more so if he will travel a little more, look about him with an



observing eye, and become aware of the beautiful objects in his favorite line of study which exist even within a few miles of his own neighborhood. We give a specimen of the book:

"VIRGILIA. *Lamarch.* Nat. Ord. *Fabacea*.—Corolla butterfly-shaped. Fruit a flat, many-seeded legume.

"Y. LUTEA. *Michaux.*—Leaves pinnate; leaflets alternate. Yellow Wood. Native of the Western States. Flowers in July.

"A middle-sized round headed tree, which when in flower is particularly ornamental. These are in clusters larger than the locust, though less odoriferous; pendulous, and of a whitish-yellow color. It is late in putting forth in spring, and one of the first to shed its leaves, which turn to a deep orange-yellow in the fall.

"It thrives best in a rich, light loam, in a cool situation, not exposed to the heat and drouth of summer.

"It is propagated by seeds sown as soon as they are ripe, in boxes protected from mice and severe frosts. They will appear in spring. It also succeeds very well budded on the *Sophora* in July.

"The finest Bartram specimen is fifty feet in height, and four feet in circumference at the base." p. 239.

So far as it goes, this is all true. We should like him to have added, "It is called Yellow Wood from the color of the wood, and not of the flower, which latter few would see possessed of much tinge of this color. It is extremely rare in all nurseries, and bears a higher price than it ought to, or than it will when a little moderate enterprise shall induce a propagator to send for the seeds to the very small district of Tennessee where only it is found in a native state. The seeds of the fine specimens in several parts of Philadelphia county have never been known to perfect themselves. We have succeeded in propagating it from layers, and these will probably make the finest trees. Allied to the *Camellia*, and the only native tree of America that has 'such a rich family connection to talk about,' added to its very great beauty and long continuance of flowering, no less than its fragrance, we should enforce a dictum already promulgated by others, that it is absolutely indispensable to an ornamental plantation. A very hard winter sometimes kills it to the ground; but it may be depended on, as far north as Philadelphia, to reproduce itself abundantly by stools, and layers may be made from these. The rootlets are small, and will not bear long exposure before replanting. Like the best people, it is melancholy to think that the best trees are the most rare and difficult to procure." Something like this might enliven a "hand-book," and give some desired information. And we should know something additionally practical if it were added, "Orders sent to — & —, the present season, will be filled. Price for plants three to five feet high, at PARSONS' nurseries, — cents; at Philadelphia, \$1."

Mr. MEEHAN gives from his own observation some very practical and simple rules to be observed by those who would go to work in earnest. We add a specimen or two, as dicta in which we fully concur:

"21. In planting, the immediate object is to get a speedy formation of new roots and fibres. The best time to plant, then, will be when the earth is a few degrees warmer than the atmosphere, and when the elaborated sap is descending and active, and the tree itself less likely to suffer from excessive evaporation. The time is the autumn, at the fall of the leaf."

This he qualifies in regard to some species.

"39. The effect to be produced by trees should be particularly well studied. The object must never be lost sight of. Pleasure, in its broadest sense, is generally a main object. This is always

to be derived from a perception of the beautiful. Unity, harmony, and appropriate fitness, are the essential elements of beauty; to these, then, must the planters' efforts turn.

"50. Thus the planter should be imbued with the principles of beauty. Without them his labors may excite only wonder at their extent, or surprise at their variety; with them, he combines lasting beauty—a source of unvarying pleasure and delight."

We trust the publisher of this volume will find so ready a sale for it, that he and the editor will combine to make it annual; and if assistance from other pens is called in from different parts of our great country, it may be made, what is much wanted, really "a hand-book of American trees."

Some of our readers will recollect with gratitude the information imparted by LONDON in his *Arboretum*. He took the pains not only to indicate the prices at English nurseries, but instituted a comparison with those of the continent; so that purchasers were not left at the mercy of one neighborhood, and obliged to purchase at several prices whatever by a sudden demand of fashion had become scarce at home. There is just now an uncommonly great demand for ornamental trees; it is a common complaint that nothing can be had but insignificant specimens of many of the most sought-for kinds; in many instances prices have doubled within two years, with no possibility of obtaining anything but two or three years old plants. Nurseries increase in number, but the demand is in advance of the stock. Time is an important ingredient in the advance of trees not enough remembered by purchasers; hence gardeners run off their young trees whenever they can, knowing that buyers flinch from the just advance in price with increase of size. They give you as a reason, that young trees succeed the best. So they do; but if we were now planting, we should give the preference to Norway Firs five years old to those having only two years' growth; and so of many others: but specimens of this and greater age are difficult to procure. Our supposed annual hand-book should go into this matter; and, while it gave directions as to the proper age for transplanting all descriptions of trees, should inform the seeker how and where to procure them. But, *would it pay?* We answer, yes. Let Mr. MEEHAN, or his co-editor, open a correspondence with all the nurserymen in the United States, (visit them would be better,) and they would cheerfully pay their proportion of the increased paper and print, to advertise this species of really intelligible and valuable information. This would be a source of profit to the bookmaker, which would pay for his increased outlay; and, our word for it, fifty copies of the book would sell where one is now disposed of. It would be indispensable not only to every gardener, but to every planter. We trust our suggestion may be acted on. S.—*Philadelphia*.

[We had already prepared a notice of Mr. MEEHAN's "hand-book," but give the preference to that of our correspondent, who is every way competent to set forth its merits and defects. We have only to observe that in the main we are well pleased with it, and believe it will be of great value to persons engaged in planting ornamental trees. It strikes us, however, that some classification of the trees would have enhanced its value. For instance, *evergreen* trees should have formed a separate section, instead of being scattered all through the volume. We think, too, that the page should have been affixed to the names in the English index. If we wish to find English Hawthorn, for example, we refer to the English index, under the letter H, and find "Hawthorn, English—*Crataegus oxyacantha*;" we have then to turn to C, in the alphabetical order of the book, and search for *Crataegus oxyacantha*. If the English index had read thus, it would have saved time to all who may consult it: "Hawthorn, English—*Crataegus oxyacantha*, 108." The reader could at once have turned to page 108. The alphabetical arrangement does not, to our mind, obviate the necessity of

a complete index. We are all in a hurry in this country, and books of reference—*hand-books*, such as this—should be so arranged as to consume as little time as possible in the profitless and unpleasant labor of turning leaves.

About eighty-two genera of trees, and two hundred and seventy species and varieties, are described: nine of Maples, six of Beech, ten of Ash, ten Magnolias, ten Poplars, twenty-two Oaks, twenty Willows, six Elms, eight Lindens, five Spruce, six Fir, fourteen Pines, &c., &c.—Ed.]

UP THE RIVER. By E. W. SHELTON, Author of *Reveries of St. Bardolphs*, and *Salander the Dragon*. With Illustrations from Original Designs. New York: CHARLES SCRIBNER, 1893.

"Man made the City—God made the Country," is an old saying of more truth than we sometimes find in "common sayings;" and yet man has some hand in giving character to the country—he may deform or beautify it. There is beauty in the uncultivated prairie, where the foot of the white man has never trod; the mighty forest, not yet desecrated by the woodman's axe, is beautiful in its majesty. But these are beauties to be enjoyed only for a short season. The most enthusiastic lover of nature would soon grow tired of such delights. The beauty of the prairie and the lonely majesty of the forest will tempt but few to forsake the pleasures of civilized life. The character of the country, then, as a home for man, depends on man himself.

In all parts of our country there is a new and constantly increasing disposition to shun the city and seek the enjoyments of country life. The question arises, what has given our people such a love of rural life? Perhaps our own and other horticultural and the agricultural journals have done as much as any one cause to produce this result. Then the better cultivation of the soil, better and more tasty buildings, improved stock and beautiful gardens and orchards, have increased the attractiveness of the country, and thrown a charm around country life. The log cabin, surrounded with stumps, was bearable; it showed necessity, and adaptation, and gave an earnest of better things in the future. But when this was suffered to go to partial decay, or substituted by an unsightly board house, surrounded with half decayed stumps and tumble-down rail fences, it was a picture by no means attractive to the man of taste.

With this love of Rural Life has sprung up a Rural Literature. We have had Willis' Rural Letters, Up Country Letters, and now Up the River, with many others of a somewhat similar character. We wish these authors knew more of horticulture—that they were familiar with fruits and flowers, and plants and trees—then their writings would be more interesting and profitable. Had the author of this work known more of the beautiful collections of fruits and flowers to be found "up the river," he would not have devoted twenty-five pages to a pair of Shanghai fowls. It is, however, a very interesting book, and many of its descriptions are exceedingly fine. We marked a few passages, but can only find room for a single extract.

"What more refreshing and delightful, especially in early spring, when sated and disgusted with grease and animal diet, than a tumbler full of short-top, scarlet radishes, placed upon your tea-table, to be accompanied with sponge-like bread and grass butter? How fresh, crisp, crackling, sparking, they are, as you take them out of water! How you love to snap them in two like brittle glass, dip the ends in a little salt, and crack them to pieces in your feverish mouth! Such indulgence is a harmless epicurism, which the present state of sumptuary laws does not forbid. I do hope that Radishes may be spared, although I foresee that the days of salad are numbered, because lettuce contains opium, as is well known."



## Foreign Notices.

**WINTER TREATMENT AND PROPAGATION OF EPACRIS.**—These will have now (Oct. 22) completed their growth and formed their flower-buds. See, therefore, that they are in a proper condition for wintering—their pots clean and the drainage complete; for to have drainage perfect is of more consequence during winter than at any other season: if it is imperfect, the water will lodge in the soil, and turn it sour; the young roots will then perish, and the plant will soon show the ill effects of such conditions. This fact can not be too strongly pressed upon the attention of the young cultivator. Should any worm-casts appear on the surface of the soil, means must be taken to get rid of them. If only one or two pots are infested, the most certain remedy is carefully to turn the ball out of the pot, and if the worms are outside, to gently remove them, without disturbing the roots; but if they are embedded in the soil, they will be more difficult to come at. If the ball be gently struck with the hand, they will creep out of their hiding-places, and may then be destroyed. Should these means fail, let the plants become moderately dry, and then give a good watering with lime-water; this will effectually displace them. The green fly sometimes prevails in the early part of winter on the young shoots; these are easily got rid of by smoking with tobacco. The application of water during winter is necessary, but only in very moderate quantities, merely just sufficient to keep the soil somewhat moist, care being taken that the ball is moistened to the center. All the artificial heat that is needed for the *Epacris* is just enough to keep out frost. If the plants, or part of them, are kept in cold pits, they should be securely covered up every night when frost prevails; in very severe long-continued frost, it may be necessary to keep them covered closely up even during the day. They have been kept so covered up for a week together without injury; but on all favorable occasions uncover them, and give them fresh air to dry up damps, and keep the plants fresh and healthy. Air must also be given plentifully to the green-house, both to keep down the temperature and sweeten the atmosphere. Once or twice during the winter let the surface of the soil be stirred, and all Mosses and Lichens removed as well as weeds. Toward spring, when the flower-buds are beginning to push, a top-dressing of fresh mold will be acceptable and useful.

In order to perpetuate choice varieties already known, the only way is to strike them from cuttings; they are by no means difficult to propagate in this manner, though certainly not so easy as a *Geranium* or a *Chrysanthemum*. The necessary materials are, some good sandy peat, some pure white silver-sand, and two or three clear bell-glasses, together with a rather warmer house to place the cutting pots in than the green-house. The best time is when the plants have plenty of young shoots upon them, which generally happens about the end of May. The best cuttings are such as are growing on the side-shoots, because these are not so gross and full of sap as the leading branches. The shoots being in a fit state to take off for cuttings, select some pots of such a size as will allow the bell-glass just to fit within them; fill the lower parts of the pots with broken potsherds for drainage, lay upon the drainage a thin layer of the rougher parts of the peat, then fill up with roughly sifted peat to within an inch of the top, and fill up the remainder with pure silver-sand; give a gentle watering from a very fine-rosed watering-pot to settle the sand; then prepare the cuttings. Take them off about  $1\frac{1}{4}$  inch long, trim off the lower leaves carefully with a very sharp knife, without injuring the bark; set the bell-glass upon the sand to make a mark, and within that mark put in the cuttings in neat rows across the pot, keeping each variety to itself. Proceed till the number desired to be multiplied is all planted; then give a second gentle watering, to settle the sand close to the cuttings; let them stand half an hour in the shade, to dry the wet off the leaves; then place the bell-glasses upon them, and set them in a

gentle heat, shading them every day when the sun shines, also let the glasses be wiped dry every morning for a month, and by that time the cuttings will begin to grow. To check them from drawing up weakly, uncover them for an hour or two every morning; and when they are rooted, remove them into a cooler house for three or four weeks, leaving the glasses off in dull weather, and shading them from hot sunshine; by that time they will be fit to pot off. If there is a considerable number, and room is scarce, they may be put into 3-inch pots, four in a pot, and allowed to remain in them till the following spring. When they are potted off out of the cutting-pot, place them in a cold frame close to the glass, and shade till they are fairly established. To cause them to form branches close to the pots, nip off the tops as soon as they begin to grow afresh; and when they have filled the small pots with roots, re-pot them, and afterwards treat them in the same manner as the established plants.—*T. Appleby, in London Gardeners' Chronicle.*

**RUSCULA JUNCEA.**—This graceful plant is not half so much grown as it deserves to be, its peculiar habit of growth rendering it an object worthy of a place in any collection; it, however, requires great attention in respect to insects, as the mealy bug increases very rapidly upon it. It will grow well in a mixture of well chopped turfy peat and loam. If grown in richer soil it runs to wood, and there are scarcely any flowers. It may be propagated by cuttings, which are struck with facility in bottom-heat; when they are rooted they should be potted off into small pots, and placed in a moist stove, and kept under a glass during their growth, if the stove is very dry; they should then be shifted, as the pots become filled with roots, until they are put in the pots in which it is intended they should flower. Some persons tie up their plants to stakes, but it is much more healthy and beautiful when left to grow in its natural state. During its growth, any of the coarse shoots which often spring up should be cut out, as they spoil the appearance of the plant. Under this treatment, it will produce its beautiful flowers freely, and form an extremely ornamental plant. The plants are generally greatly exhausted after their flowering season, and do not make such good plants when grown over again as those will that are grown from cuttings. Its flowers last for a long time, but during its growth any straggling flowers that should show themselves should be picked off, as they are liable to weaken it, and injure its regular flowering.—*Gardeners' and Farmers' Journal.*

**"NE PLUS ULTRA"—A FINE LATE BROCCOLI.**—Preëminently superior among the new varieties of vegetables which from time to time come before the public, stands this new Broccoli, being by far the best variety of that esteemed vegetable that has yet come under my notice; and possessing as it does all the good qualities which its name implies, I feel I shall be doing the public a service by making its merits more generally known. For the last three years I have grown this sort along with others of known excellence, with the same unvaried result in favor of the "*Ne Plus Ultra*," and during the last year, a season of unparalleled fatality to Broccolies, while others were killed this sort stood uninjured, producing its fine heads in May and June, equal if not superior to other sorts in favorable seasons. The chief merits of this Broccoli consist in its being very hardy, possessing a dwarf habit, with large and compact rich cream-colored heads, which are protected by ample smooth glaucous foliage, and it has the richest flavor in the whole tribe. Need I say more than this, that it possesses all the finest qualities of the far-famed *Penzance* Broccoli, in addition to a hardiness which has long been a desideratum in that otherwise excellent sort. No garden, however small, should be without it.—*H. Mitchell, in London Gard. Chronicle.*

**TREE LABELS.**—I am of opinion that nothing equals thin sheet lead for this purpose; it is very pliable and durable; the letters should be stamped on it, and the labels soldered to small iron stakes, or nailed to the wall, as the case may be. I have seen labels of this kind which had been in use for sixty years, to all appearance as good as they were the day they were made. Putty, paper, or wood, are more fit for the boudoir than to stand the test of the seasons. They want renewing every five or ten years; but this is not the case with lead, which is very lasting.—*W. Brown, in London Gardeners' Chronicle.*

## Editor's Table.

MR. HOVEY, under the impression, as it seems to us, that nobody has taken the trouble to read his last volume, gives a summary of its leading articles in the opening number of this year. Among other notable performances, which he takes occasion to rejoice over, are his precious effusions on root-grafting. He says:

"Incidentally, in the early part of our last volume (XIX) we copied some remarks made at the Northwestern Fruit Growers' Convention, in regard to root-grafting, and subsequently gave our views in relation to its practice. These called forth what we suppose was intended as a reply from a contemporary. There was not one single fact brought forward to refute what we said, but only a string of words and wonderful facetiousness, which we allow to pass for what they are worth. Our views of the system remain unchanged; that is, we consider root-grafting as generally practiced—and everybody who knows anything about it knows what that is—an injudicious mode—of *economy* we say nothing—of obtaining good orchard trees."

It seems to us quite superfluous in Mr. HOVEY to make this formal announcement that his views "remain unchanged." Nobody who knows him would expect such a thing. To say Mr. HOVEY has "changed his views," would be about equal to saying that the leopard had changed his spots.

At the last meeting of the Northwestern Fruit Growers' Association the following resolution was passed:

"*Resolved*, That we are in favor of root-grafting as a principal mode of propagating the Apple."

THE SEASON.—The winter here, up to this time, (January 20,) has been mild. The first snow of any consequence fell about the 21st of December, and for about two weeks after that the weather was moderately cold; the thermometer fell as low as zero only twice. Except in exposed places, where the snow was blown off, the ground was not frozen until about a week ago, when a sudden thaw was followed by a few cold days.

PEARS IN OHIO.—The Hon. JAMES MATHEWS, of Coshocton, says: "Among the Pears that I consider the very best, and which fruited with me this year, were *Malclaine*, *Bourré Giffard*, *Ott*, *Dojeanné d'Été*, *Bartlett*, *Urbaniste*, *Heathcote*, *Seckel*, and *Louise Bonne de Jersey*. I think it would be hard to select nine others that would beat these. If I were confined to but one early Pear, it would be the *Bourré Giffard*."

THE New York Horticultural Society is holding conversational meetings, we are informed, for the discussion of questions concerning the cultivation of fruits and flowers. Such meetings, if well sustained, would do much good, not only in New York, but in every city and village where a dozen persons are to be found interested in the cultivation of the orchard and the garden. We will be happy to publish reports of the discussions, if some of the officers, or some friend, will furnish them.



STRAWBERRIES.—In the discussion of Strawberries at the Chicago pomological meeting, Dr. WARDER is reported to have said that the variety we figured as *McAroy's Superior* was *Longworth's Prolific*. We are sorry the Doctor should have taken the trouble to promulgate such an error among our western friends. We know that our drawing is a correct portrait of medium sized specimens of *McAroy's Superior*; and several of the best informed gentlemen at Cincinnati, including Mr. McAroy himself, has so pronounced it. This variety is sufficiently distinct from the *Prolific* not to be confounded by any person of ordinary intelligence in such matters. We will here take occasion to assure our readers that we shall never take the trouble to prepare a colored drawing of any fruit until we are perfectly satisfied in regard to its nomenclature, as well as its quality.

THE DELAWARE GRAPE.—MR. THOMAS J. MYERS, of Dundee, Yates county, N. Y., writes us that there is a Grape in Steuben county, where it has been cultivated for twenty years, that answers our description of the *Delaware* in every respect. He says the vine was owned by a queer old Dutchman, who never would give either a root or cutting of it even to his nearest neighbors; but that at length he has succeeded in getting cuttings, and will propagate it. It appears that the owner of this vine obtained it from a Mr. MAXFIELD, living between Philadelphia and Trenton; and that he brought it from Lisbon, and called it the "Lisbon wine Grape." Mr. MYERS says it is perfectly hardy on the highest, coldest, barren hills of Steuben, and bears abundantly.

THE PEACH TREE BORER.—P. R. FREEOFF, Esq., of Auburn, has handed us a branch of the Peach tree, containing the grub of the Borer. It is seldom this insect is found in the branches, the principal point of its attack being just at the surface of the ground.

OSAGE ORANGE HEDGES.—M. L. SULLIVAN, Esq., the great land proprietor of Columbus, Ohio, has engaged, says the *Ohio Cultivator*, twenty bushels of Osage Orange seed, to hedge his Illinois lands. Success to the enterprise!

WE regret to learn that the plates of a new and valuable work on *Farm Implements*, by JOHN J. THOMAS, were destroyed in the great fire at the HARPERS'.

WE have some half a dozen pages in type, crowded out. This will account for the non-appearance in this number of several interesting articles from correspondents, &c.

HORTICULTURE IN OREGON.—We have during the past month received some very flattering letters from Oregon, and what is more interesting to the publisher, some very long lists of subscribers. About thirty copies are taken at one post office, (Oregon City.) We give a few extracts from these letters:

"The *Horticulturist* is doing a philanthropic work for Oregon, by stimulating a few men to set the example of fruit culture before their fellow citizens, which is truly inspiring. I have no doubt that more attention is being paid to the growing of fruit in Oregon than in any other new territory in the Union. MESSRS. LADD and LEWELLING have truly become benefactors, by introducing at an early day, at great expense, and under most disheartening circumstances, so large a variety of the choicest orchard fruits from the States. They have lost many varieties in consequence of a want of sufficient care in putting up the young trees at the nurseries for shipment through a tropical climate. Other whole boxes have been purloined on the Isthmus by treacher-

ous carriers. Yet they have persevered, and succeeded in introducing about seventy varieties of Apples, forty of Pears, fifteen of Peaches, as many of Plums, twenty of Cherries, several of Quince; besides Nectarines, Apricots, Almonds, Currants, Gooseberries, and the Walnut and Hickory nuts. They are doing well in their business.

Several varieties of their Apples, Pears, Peaches, Plums, Cherries, and other fruit, have borne the three last seasons. In general terms, they may be said to promise well, both in the size and quality of fruit. Our trees fruit from one to three years younger here than in the Northern States, and produce more abundantly. No doubt your shy bearers would, with us, load themselves heavily with fruit. This peculiar characteristic of our climate leads us to anticipate that our trees will be short lived, unless they receive a high state of culture. Is this a logical deduction? What peculiar treatment will be necessary to supply trees with nutrition, where they load themselves beyond their capability of support, without breaking?" E. F.—*Oregon City*.

Maintain a vigorous growth by good culture of the soil around the trees, by occasional dressings of compost, and if necessary, thin the fruits. Pruning, also, stimulates the growth of over-fruitful trees. The following is an extract of a letter from J. W. LADD:

"Fruit growing is attracting a lively interest throughout Oregon. The farmers are generally planting out large orchards of the choicest kinds of fruit. We have most of the leading varieties cultivated in the Northern States. In the summer of 1847 Messrs. LEWELLEN & MEEK, from Iowa, brought across the plains most of the leading varieties of fruits cultivated in the West, and now have a large nursery and orchard of bearing trees at Milwaukie, eight miles below this place. Some of their Pears sold at a dollar each, Apples at twenty-five cents, and some, I believe fifty cents. I brought from New York in the fall of 1850 some twenty-three hundred fruit trees, embracing most of the leading varieties cultivated there. These were, I believe, the first trees ever brought to this coast by the Isthmus that lived. Fruit trees make an astonishing growth here, and bear early, and the fairest fruit that I ever beheld. Some fifteen different kinds have borne fruit this year, on small trees only one year from the bud.

Our climate seems peculiarly favorable to the growth of trees. I have not seen ice thicker than window glass this year. We have had only three hard frosts; just enough to stop the growth of trees. All kinds of hardy grass is yet growing finely, so that the loose stock are fat without being fed. J. W. L.—*Oregon City, Dec. 10th.*"

**FRAUD IN FRUIT TREES.**—The trade in trees has now grown to be so extensive, that a large number of persons are attracted to it who are mere dealers, buyers, and sellers. Many of these are honest, responsible men, who aim at doing a fair, honest business; but on the other hand, many of them are notoriously dishonest, and are perpetrating gross frauds upon the community. By deceitful means they procure the catalogues of respectable concerns, and represent themselves as agents authorized to solicit orders. They obtain their orders, and then fill them with whatever trash they can buy cheapest. People everywhere should be on their guard. We copy the following sensible article on this subject from a late issue of *Moore's Rural New Yorker*:

"In a late number of the *Rural*, we find an article quoted from the *Worcester (Mass.) Spy*, under the heading, 'Fraud in Fruit Trees,' upon which, together with the editorial comments, I wish to make a few remarks. Such frauds as here spoken of, have been extensively practiced in this part of the State, the sellers invariably representing themselves as agents of the 'Rochester Nursery.' The purchasers, in most cases, appear to think there is but one nursery in Rochester, and do not even know the name of the person with whom they contracted. Of course, nobody is accountable, and no person's reputation has suffered by the transaction. A single example will show how this business is done up here. A neighbor engaged a few trees, and among them was

a *Black Tartarian Cherry*. The trees, labelled according to contract, were delivered and paid for, and our neighbor, not being very observing, did not discover, until the agent was gone, that the tree for which he had paid fifty cents, supposing it to be a *Black Tartarian Cherry*, was an Apple tree. It may be readily inferred that the 'Rochester Nursery' is not very popular, and yet I find no evidence that one of these trees ever came from Rochester. But be that as it may, I am confident that no nurseryman would hazard his reputation by sending abroad such trees on contracts as are brought in here, unless at the same time, he could hide himself behind some irresponsible agent.

"But what shall we say of the peculiarities of that 'tree manufactory located in an obscure part of New York State,' referred to by the *Worcester Spy*? Can we stretch our credulity enough to believe that trees can be root-grafted in winter, and grow like suckers for two years and then be large enough to 'cheat greenies?' Surely nothing of the kind was ever before thought of in Massachusetts, or the writer would not have traveled to 'an obscure part of New York State' for an example! With regard to these agents, I give it merely as a matter of opinion, and would like to be corrected if wrong, that the Rochester nurserymen have no agents abroad for whose transactions they hold themselves responsible.

"Now, if we do not wish to be 'gulled by this regular wooden nutmeg operation, nor to be verdant enough to purchase of pedlars,' how shall we obtain our fruit trees? We should obtain them at nurseries, conducted by men of good standing and reputation, on whom we can rely. However satisfactory this answer may be, it is, I think, still liable to some objections. If nurserymen did not sell to dealers and agents at wholesale, but confined themselves to furnishing directly those who purchase for their own setting, is it not plain that the large nurseries of the cities, which now send out thousands of choice fruit trees, would be diminished to rods instead of acres? If no trees were transplanted except by those who would go to the nurseries and obtain them, there would not be one fruit tree set, where there are now twenty; and in many locations, at a distance from nurseries, our choicest fruits would remain long unknown. Another difficulty: a farmer comes to the nursery in the spring and wishes to obtain some fruit trees, but he is ignorant of varieties, and yet does not wish to trust the judgment of the nurserymen, but expects a verbal description of the different fruits to aid him in selecting.

"Now, during the season of transplanting, the busiest of all busy men are nurserymen; and arrangements should be made to encroach as little as possible upon their time at this season. Every man that owns an acre of land, should own a copy of the works of DOWNING, THOMAS, or BARRY; he can then judge for himself in reference to varieties.

"I concluded there is but one safe way of purchasing trees; and that is, to deal with those who are responsible, and have a reputation at stake; and whenever this can be done, it matters not whether a man buys at the nursery, or at his own fireside, he will be safe in either case.—*A. M. Williams, Marcellus, N. Y.*"

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BOOKS AND PAMPHLETS RECEIVED.—We have only space at this time to acknowledge the receipt of the following:

*Transactions of the New York State Agricultural Society, for 1852.*

*Transactions of the Northwestern Fruit Growers' Association, for 1853.*

*Twenty-Third Annual Report of the New Haven Horticultural Society, for 1853, with an address by Rev. W. CLIFT.*

*Transactions of the Worcester County Horticultural Society, for the years 1852 and '53, containing the annual reports of committees, with lists of premiums awarded, the officers of the Society for 1853, and a list of its members.*

From F. G. CARY, Superintendent of Buildings and Grounds, a circular embracing a brief history of Pleasant Hill Academy and Farmers' College, at College Hill, Hamilton county, Ohio, together with a plan and course of study of a department for the promotion of scientific agriculture and Horticulture; also, a catalogue of the officers and students for the college year 1852-'53.



## Kitchen Garden.

THE FARMERS' NEGLECT OF THE KITCHEN GARDEN.—The reluctance shown by this class of people to give a little time and labor to the production of Vegetables for the use of their families, is most surprising. They appear to think the employment altogether beneath their attention. It may be all very well for the women to engage in it, but to suppose that the farmer himself would do so is deemed almost absurd. Ask a farmer why he does not set off a piece of his land as a Kitchen Garden wherein to raise a plentiful supply of agreeable and wholesome vegetables, and in nine cases out of ten he will reply, "Oh, I have not the time, and cannot afford the labor." Now this is altogether a misapprehension. For what purpose has he time at all, but to support comfortably himself and those dependent upon him? (higher aims always supposed.) If, therefore, the products of the kitchen garden will (and who doubts?) most materially add to the comfort and health of a family, and at a far lower cost than the yield of a field, to grudge a little time and trouble is surely inconsiderate if not unreasonable.

Very long is the list of choice edibles; a small lot of ground so devoted will afford Asparagus, Sea Kale, Cress, Lettuce, Peas, Beans, Squash, Onions, Cabbages, Cauliflowers, Carrots, Sal-ify, Parsnips, Beets, and Tomatoes, besides many useful herbs. A few days' labor in the year would suffice to give an abundance of these things. Probably there is no one who could raise them to greater advantage than the farmer. In most cases he can choose a suitable soil, and he never need lack manure. Indeed, he ought to have these rich gifts of nature in their highest condition. No one can doubt but that vegetables would contribute to the health and enjoyment of the farmer and his household. Through the greater part of the year he eats salt pork, which is apt to engender scrofula and kindred diseases. It is owing to this extreme use of salt provisions, without the counter tendency of vegetables, that such diseases are so prevalent. If he must feed so much upon salt meat, he ought to provide that which would prevent its injurious effects. I find that such people have no reluctance to eat of them when presented, but do so apparently with as great relish as others, while they neglect their cultivation. The expense of growing vegetables is small. Let us take Asparagus as an example. The bed once made will last a lifetime, and two or three dollars will obtain a sufficient stock of plants from any nurseryman.

If these things contribute to the health of a family, so they do to its enjoyment. How much they cheapen the cost of living, they know best who are careful and industrious enough to grow them.—CLERICUS.

The above, from a friend in Canada West, is entitled to careful consideration; for no one can be truly said to LIVE who has not a GARDEN. None but those who have enjoyed it can appreciate the satisfaction—the luxury—of sitting down to a table spread with the fruit of one's own planting and culture. A bunch of Radishes—a few heads of Lettuce—taken from the garden of a summer's morning for breakfast—or a mess of green Peas or Sweet Corn—is a very different affair from the same articles brought in large quantities from market in a withering condition, to be put away in the cellar for use. And a plate of Strawberries or Raspberries lose none of their peculiar flavor by passing directly from the *border to the cream*, without being jolted about in baskets until they have lost all form and comeliness. And yet, how many farmers, with land enough lying waste to furnish them with all these luxuries—and how many more in the smaller cities and villages, possessing every facility for a good garden—either through ignorance or indolence are deprived of this source of comfort. These things ought not so to be. Those who have never tried it will be surprised to find how rich is the return for labor bestowed. But we would not advise the attempt to do too much. A correspondent writes that he "tried his hand at a vegetable garden last year, for the first time, and planted everything he had seen recommended,

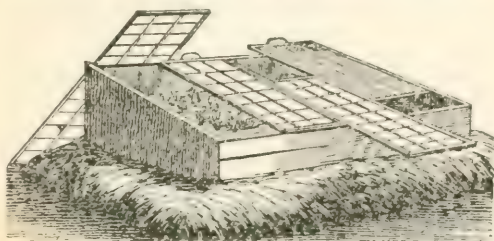
of which he could procure seed." The result was unsatisfactory, as might have been expected. It is not well to attempt too much at first. A few articles well cultivated afford pleasure; a large collection poorly cared for is a source of annoyance.

The present month is the time to get things in order, and as the first work is the making of *Hot-beds*, sash, frames, &c., should be made ready. A new subscriber, a young friend in Ohio, requests us to give simple directions for making a hot-bed, "*just for family use*, unless we consider it a matter so well understood that the room it occupied would be wasted to most of our readers." The many questions we have asked by hundreds of new subscribers, shows us that many are turning their attention to gardening who never gave the subject a thought before, and that the simplest directions in the most ordinary practice are eagerly sought for, and really needed. We therefore comply with the request of our correspondent, giving the system we usually practice, and have before recommended.

Every one should have a hot-bed, if it were only to forward a few plants for the garden. The too prevalent opinion is, that they are expensive and difficult to manage, requiring the skill of the professional gardener. Both suppositions are entirely erroneous. A hot-bed may be constructed by any man of ordinary ingenuity. A frame of about 12 feet long and 6 wide, which will allow of 4 sashes, each 3 feet wide, will be found large enough for any family. It should be made of common two-inch plank—the back about 3 feet high, the front about half that, the ends having a regular slope from back to front. This will give an angle sufficient to throw off rain, and give the full benefit of external heat and light to the plants within. If the beds are narrower, the front must be higher in proportion. The sides and ends are simply nailed to a strong post, four inches square, placed in each corner. For the sash to rest and slide upon, a strip six inches wide is placed upon the frame, the ends morticed or sunk in the sides of the frame, so as not to cause a projection. The sashes are made in the ordinary way, but without cross bars; and in glazing, the lights are made to overlap an eighth or quarter of an inch, to exclude rain. Such a frame, costing but a mere trifle beyond the labor, will last for years, and furnish all the Cabbage, Tomato, Celery, Cauliflower, Pepper, Melon, and Cucumber plants needed, with a sprinkling of early Radishes, &c. Where so large a frame may not be wanted, an old window may be used for

sash, and all expense of glazing avoided. The annexed figure will convey an idea to those unacquainted with it. One of the sashes is moved down as in admitting air, and another laid off entirely.

Hot-beds should occupy a dry situation, where they will not be affected by the lodgment of water during rains or thaws. They should be exposed to



the east and south, and be protected by fences or buildings from the north and northwest.

Where it is intended to merely grow plants for transplanting to the garden, they may be sunk in the ground to the depth of eighteen inches, and in such a case require not more than two feet of manure; but when forcing and perfecting vegetables is designed, a permanent heat must be kept up, and the bed must be made on the surface, so that fresh and warm manure may be added when necessary. A depth of three to four feet of manure will in such cases be wanted.

Manure for hot-beds requires some preparation. It should be fresh stable manure, placed

in a heap, and turned and mixed several times, promoting a regular fermentation. It is thus made to retain its heat a long time; otherwise it would burn and dry up, and become useless.

The mold should be laid on as soon as the bed is settled, and has a lively regular-tempered heat. Lay the earth evenly over the dung about six inches deep. Radishes and Lettuce require about a foot of earth. After it has lain a few days it will be fit to receive the seed, unless the mold has turned to a whitish color, or has a rank smell, in which case add some fresh earth for the hills, at the same time holes should be made by running down stakes, to give the steam an opportunity to escape.

Those who wish to force Cucumbers, &c., should begin, in this section, if the weather is favorable, by the 1st of March. For raising plants, the middle is time enough.

**CABBAGES.**—It may not be generally known that Cabbages readily grow and are easily propagated by slips. A stump may be put out in the spring, and the sprouts as they vegetate cut off, the cut allowed to dry, and then planted. When Cabbage or Cauliflower throw off side shoots they may be used in the same way. Cabbage thus raised have short stalks, and are sure of being true to the parent. I have often pursued this method when short of seed. C. E.—*Sandwich, C. W.*

### Answers to Correspondents.

(R. B. W., Pieton, C. W.) **INJURY FROM THE MORNING SUN.**—The rays of the morning sun falling directly on frozen foliage or flowers, are injurious; and in localities where late spring frosts occur, it will be well to take measures to ward them off. Trees will do this better than a board fence.

**MAGNOLIAS.**—The *acuminata*, or "cucumber tree," is as hardy as your fruit trees. The *purpurea* or Chinese purple, we think will also stand your climate.

"**EGYPTIAN LOCUST.**"—We know of no tree bearing this name.

(D. W., Wellington Square.) **UPRIGHT QUINCE.**—We do not consider it a good stock for the pear. It may do for a few very strong growers.

Will you oblige me by answering the following inquiry, in the *Horticulturist*, if convenient. My house stands on a mound, eighty rods from the public road. The drive is laid out winding, and is planted to the foot of the mound, some twenty-five rods, with standard Cherry and Pear trees. Of the following trees, which would you plant the balance of the drive with? 1. Norway Fir. 2. Norway Fir, alternated with Cherry. 3. Norway Fir, alternated with Mountain Ash. 4. White Pine. 5. Sugar Maple. 6. Silver-leaved Maple. S. E.—*La Moille*.

As your avenue is already planted in part with deciduous trees we would advise you to complete it with them; and we prefer the Sugar and Silver Maple—either one, or both; the latter, if you prefer very rapid growth. If you plant evergreens, choose the Norway, and plant not less than twenty or thirty feet back from the walk. We must suggest, however, that a regular row of trees on each side of a winding drive is not consistent. It would be if the drive was straight.

What is a person to do who lives among the hills, where the ground is liable to wash, and who wishes to plant an orchard? If trees are planted among the Blue grass, which kind Providence causes to spring up spontaneously, in order to hold the soil together, they do not thrive well; and if they are worked like corn, as they ought to be, the soil is carried away by every heavy rain that falls. Can any system of subsoiling or draining, or both, prevent this washing process, so that the trees can receive proper cultivation? B.—*Perry Co., O.*

We fully appreciate your difficulties; and we hope some of the readers of the *Horticulturist* who have been compelled to exercise their ingenuity under similar circumstances, may be able to



suggest a better method than we can. We know of no other way than to prepare a nearly level bed, of ample dimensions, for each tree, and keep the remainder of the ground in grass. We have seen this practiced advantageously.

In the *People's Journal* of New York, of November, 1853, I saw an account of a *Houghton's Seedling Gooseberry*, surpassing all others in many respects. What is your opinion of it? Is it like G. NEWLAND's *Mammoth Alpine Strawberries*? T. THORNLEY.—*Fallsdon, Pa*

We think very highly of *Houghton's Seedling Gooseberry*. It is much inferior in size, beauty, and flavor, to the large English varieties, such as *Crown Bob*, *Warrington*, *Whitesmith*, &c.; but then it is more at home in our climate. It grows freely, propagates easily, bears most abundantly, and the fruit is comparatively, though not wholly, exempt from mildew. The fruit answers every purpose, when it is used in the green state, about as well as any. It should be at least one among every collection.

PERMIT me to ask of you, through your journal, some information on setting Apple orchards—the distance apart most advisable. Our nurserymen differ very much on the subject—varying from two rods to four. Please favor us with a little more light. K.—*Rock Co., Wis.*

For a permanent arrangement, forty feet will not be too much in rich, deep soil, where the Apple tree is likely to attain its greatest dimensions. In light soils, thirty feet will be sufficient. An economical arrangement is to place the trees twenty feet apart, and after they have borne a number of years, and begin to encroach upon each other, remove half of them. In this way you obtain the greatest advantage from the ground occupied and the labor expended upon it. The preparation of the ground costs as much for fifty trees as for a hundred, and the first cost of the tree is a small consideration.

### —♦♦♦— Horticultural Societies.

NEW YORK STATE AGRICULTURAL SOCIETY.—The Annual Meeting of this Society will be held on the second Wednesday of February. The Winter Exhibition of Fat Cattle, Sheep, Poultry, Fruit, Grain, &c., on Tuesday the 7th, Wednesday 8th, and Thursday, 9th February, at Albany. Address at the Capitol by Prof. E. CARR, Albany University, on Wednesday Evening, February 8th, and by the President, LEWIS G. MORRIS, on Thursday evening.

UNITED STATES AGRICULTURAL SOCIETY.—The Second Annual Meeting of the United States Agricultural Society, will be held at Washington, D. C., on Wednesday, February 22d, 1854.

ADRIAN HORTICULTURAL SOCIETY, (MICH.)—The Annual Meeting of this Society was held on the evening of the 5th of January. This Society, we learn, is in a flourishing condition. The following were the officers elected for the present year:

D. K. UNDERWOOD, President; L. G. BERRY, Vice President; F. C. BEAMAN, Secretary; S. LATHROP, Treasurer; B. F. STRONG, Librarian; W. H. Scott, B. F. Strong, B. W. Steer, J. W. Helme, W. H. Walldby, Executive Committee.

STEALING FRUIT, &c.—At a late meeting of the Allegheny County Agricultural Society a Committee was appointed to correspond with other similar societies, soliciting their coöperation in an effort to procure, at the present session of the Pennsylvania Legislature, an act declaring the stealing of growing fruit, vegetables, grain, &c., larceny. We shall publish their Circular in our next. ROBERT McKNIGHT, of Pittsburgh, is chairman of the committee.





LILIUM LANCIFOLIUM SPECIOSUM





Engraved on Wood by J. W. CHAMBERLIN, SCULPT.

### BELMONT.

Finished in 1800 by L. S. HASSELL, Esq., opposite Belleville, N. J. Now the residence of Dr. J. V. D. HARRIS.

A. J. DAVIS, ARCHITECT.



## Hints on Transplanting.

IN our last number we endeavored to call attention to certain points in the nursery management of young trees, necessary to prepare them for successful removal. We now propose to offer a few suggestions on *transplanting*.

Notwithstanding we have made great progress in the art of planting, during the last twenty years; and with all the information that has been disseminated on the subject, by means of widely-circulated pomological books, periodicals, catalogues, &c.; yet there is among the mass of our vast population who till the ground and plant trees, a very imperfect knowledge of what good planting really consists in. This every nurseryman knows, and every person whose occupation, duties, or tastes, put him in the way of observation. "Will you warrant my trees to live, Mr. Nurseryman?" says one. "No." "Then I can't buy from you; for I should certainly lose three-fourths of them, if not all." "I will give you double the price for your trees, if you will warrant them to grow," says another; "for I invariably fail in my planting." Another says, "I can not understand how you nurserymen plant so successfully; you must possess some secret art, or put some peculiar substance about the roots. Pray, what is it?" So one after the other proceeds, relating his misfortunes, and asking information from the poor nurseryman, who, however much he may desire to enlighten his customers, is too busy to discourse intelligibly on the theory and practice of tree planting. The fact is, this is comparatively a new and unknown operation to thousands of people who every year find it necessary to go about it; arboriculture has not been considered a legitimate branch of rural studies, but as the business of the gardener or nurseryman exclusively.

Now, as the whole country seems to be thoroughly awakened on the subject or planting, this prevailing lack of knowledge becomes every day a matter of painful experience. The supposition that any man who could set a fence post could plant a tree, is demonstrated to be an illusion, because a tree is not a post, but a living, organized body, made up of a great many parts, all beautifully connected, and reciprocally dependent upon each other. The roots are the principal organs of nutrition, and at the same time sustain the tree in its position; the trunk and branches convey the nutriment from the roots to the leaves; and these refine or elaborate it, and prepare it for the formation of new parts. These different parts or organs must each fulfil their respective functions, or the harmony of nature is broken, and the tree immediately ceases to have a perfect existence.

Now the roots, we have said, are the organs of nutrition; and if they are not in a condition to supply a sufficient quantity of the proper kind, the tree must starve, just as an animal would if deprived of a proper supply of food. It is obvious, then, that the planter must first of all see that the soil in which he proposes to plant is in a condition to yield the essential nutriment to the roots of his trees. How is this to be done? We can not now enter into any detail respecting the constituent parts of soils in par-



ticular, nor of the various chemical changes and combinations which must transpire in them, to prepare the food of plants for absorption by the delicate spongioles of the roots. Experience has taught us that trees will not live—at least, that they will not flourish—on a *poor* soil; nor on a very *thin* or *shallow* soil, with an impenetrable bottom; nor in a very stiff, tenacious, clay soil, that bakes as hard as brick during the growing season; nor in a wet soil, where water is stagnant about the roots. No man need plant trees in any such soils, and hope for success. Trees—all trees usually planted for fruit or for ornament—require a soil of at least fair average fertility, such as any farmer would expect to yield a good crop of grain or roots: but all do not require the same degree of fertility; for among fruits, the Peach and the Cherry will yield good crops on a lighter and poorer soil than the Apple, Pear, Plum, or Quince; and the Pine and Fir tribe will succeed well on light, poor soils, unsuited to the Oak, the Maple, the Beech, and indeed the great mass of deciduous trees.

On *thin soils*—say four or five inches deep—lying on a hard subsoil, few trees, and especially fruit trees, will succeed, because the roots are confined too near the surface; and in our hot and dry summers the earth around the roots becomes parched, as no moisture can ascend from the subsoil: vegetation is consequently arrested, and the trees become stunted and scrubby, like the productions of arid plains.

*Stiff clay soils* are unfavorable to the growth of trees, and more especially young newly-transplanted trees. They bake on the surface, and exclude both air and moisture, and they become so hard that the roots are unable to extend through them any more than they could through a stone wall. We admit that careful and skillful cultivators might succeed on such soils, by expending on them a great amount of timely, well-directed labor, to keep them porous and friable to a reasonable depth. But few will take this trouble, and therefore such soils should be avoided as far as practicable.

*Wet soils* are, of all the others, the most objectionable, either for fruit or ornamental plantations. Wet feet are not more ruinous to human health than a wet soil is to trees. It fills up every cavity of the soil which should be open for the passage of air, without which healthy nutriment for the tree can not be prepared; destructive gasses are formed, and directly the tree declines. We have often been struck with the effect of even a very trifling excess of moisture. In a row of trees descending from dry land to moist, it is observed that on the dry upland the trees are vigorous, with smooth, clean bark; but as soon as we descend to the moist places, the trees look feeble, the bark is mossy, and in every part we see symptoms of decline.\*

Now, the planter who desires to ensure success, must see that his soil is not in any of these extreme conditions. If it be poor, manure it liberally a year before hand, and crop it with roots that will give the soil a good working, and also help to enrich it. If it be shallow, deepen it, if possible, by breaking up the under stratum with the sub-

\* Planting trees in *wet* soils is a very common and fatal error. We often hear people say, "I can not plant trees in my soil except in a dry time." A short time ago we were told by a friend that his gardener had not planted his trees last autumn, because the holes he had dug became full of water, like so many reservoirs, before the trees arrived, and he did not expect it would leave them till some time next spring. This is but one case out of thousands.

soil plow. If one plowing be not enough, give it two or three; and if it can not be plowed, trench it, or at least trench a large circle for each tree; throw out the poor subsoil, and substitute good, fertile loam. If it be wet, *drain* it, and drain it thoroughly. If you have stones on your land, make stone drains, as large and deep as the outlet will admit. If you have no stone, use tile, which is now manufactured in many parts of the country. In a wet soil to be planted with trees, tile drains should be at least three to three and a half feet deep, and not more than a rod apart, to carry the water away quickly and effectually from the soil about the roots. Draining and subsoil plowing are the two great improving operations of modern farming; and they are by far more important to the orchardist and all who grow and plant trees, than to the farmer who cultivates merely annual crops.

Having the ground thus thoroughly prepared for the reception of the trees, planting is in order; and the first step is to dig the holes. Now it so happens, that in the seasons of planting nearly all classes of people, both in town and country, are pressed with their ordinary avocations; and the consequence is, that planting is either deferred till too late, or else it is done hurriedly and badly—the holes are made just large enough to cram the roots into, and the earth is thrown in about them without any higher aim than merely to cover them. In these cases the roots are crowded, confused, and bent up, so that a large number of them never come in contact with the earth, and of course die. The careful planter will make holes so deep that a bed of *good, friable, sandy loam* may be spread on the bottom, to set the trees on. It makes a great difference what sort of soil is placed around the roots; because, as every propagator knows, certain soils are much more favorable to the emission of new roots than others. We object to all kinds of manure, chips or shavings of wood, and various other materials that are occasionally prescribed; all of which may be very useful and proper to be placed *near* the roots, to furnish a supply of nutriment when young active rootlets have been formed, and are capable to make use of them. To promote re-rooting, use fine, fresh, sandy loam—a large proportion of sand, as this remains porous and does not hold injurious quantities of moisture. Then the holes must be *wide* enough to allow every root to be spread out its natural length, and in a free, natural direction; because every twist or bend has the same effect as a twist or bend of a branch—namely, that of checking the flow of sap to it, and inducing feebleness. In replacing the earth, exclude all poor soil taken from the bottom; fill in the sandy loam mixture carefully and slowly, so that not a cavity will be left, but that every root will be placed in direct contact with the soil. Some kid-glove planters use sharp sticks to work in the earth, and thus injure the roots. The man who is really in earnest, will take his *hands*.

In the spring, and more especially at an advanced period, when the soil has become quite dry, and when it is likely to remain so for a length of time, a pail or two of water, or a sufficient quantity, may be applied, to furnish the degree of moisture necessary to promote the formation of roots, and also to supply the demand which the opening buds will make upon the roots. This water should be applied before the earth is all filled in; because the layer of earth laid over it prevents rapid evaporation

and the consequent baking of the surface, which would render the application of water an injury rather than a benefit. Trees are very often planted *too deep*. The formation of new roots requires *heat, air, and moisture*; and roots that are buried far beneath the surface are in a great measure excluded from the genial influence of heat and air, and the ends, instead of emitting new fibres, decay, and of course the tree lingers and dies. Vast quantities of trees are lost on this account, and we can not too strongly urge planters to guard against it. If we examine healthy, vigorous trees, we find that the most active, important roots, are not far from the surface; and we know that it is a very good plan to bury deeply any portion of a tree that we desire to keep in a dormant state.

When the tree is planted, it should immediately be mulched; that is, a covering three or four inches deep of half decayed manure or litter should be spread over the ground in a circle around the tree, from the trunk to the extremities of the roots, and some distance beyond. This mulching prevents evaporation from the soil, and, what is very important, aids in preserving a uniform temperature about the roots; besides, when rains come, they dissolve this mulching, and wash down its fertilizing parts to the roots. This is a much safer way of applying manure to newly planted trees than placing it in immediate contact with the roots.

In cases where trees are much exposed, or have sufficient top to catch the wind, supports of some kind are necessary until the roots have taken hold of the ground. In some cases a single stake will be sufficient, but it must be sunk so as not to injure the roots; and there should be a piece of cloth, matting, or some soft substance, placed between the tree and stake, or tied loosely around the tree, to prevent it from being chafed.

We have said nothing about pruning the tree. We said, in last month's article on this subject, that shortening the branches at the time of transplanting was a necessity only because the roots are generally mutilated and injured in taking up. This is substantially true. If we could take a young tree up with *all* its roots entire and uninjured in any way, and replant it before they could suffer from exposure, there would be no need of lopping off branches. But this we may as well say is impossible—the roots must and will be cut and bruised and broken and dried; and the more they suffer, the less able they will be to fulfil their functions; and therefore, in the case of deciduous trees, we must either shorten and thin the branches, or see our trees die. All bruised and broken roots should be pruned off clean and smoothly up to the sound wood, else they will decay, and retard the formation of new roots, if they do not kill the tree. The freshly cut surface of a sound root, placed in proper soil, like a cutting, under favorable circumstances, soon emits new fibres.

In reducing the top, regard should be had to the form of the tree; in most cases it is better to thin the branches than to shorten all closely. It should always be remembered that leaves aid in the formation of roots. In fact, unless the leaves continue to prepare new matter, the roots will not grow, no more than the leaves will continue to perform their functions without the aid of the roots. We know that leaves expand before the roots have become active, and that new roots are formed before any leaves



appear; but in both cases the support is derived from the unexhausted supply laid up during the previous season, and which would last for a very short time. This is why trees sometimes put forth leaves most promisingly, and wither under the first warm sun; the roots being unable to extract sufficient moisture from the soil to compensate for evaporation. Just so cuttings often send out leaves, and promise to the uninitiated a rapid growth; and in an hour they are withered. No roots were formed, and the small stock of food laid up in the cells of the cutting was soon exhausted.

In regard to the management of trees subsequent to planting, we shall have something to say next month.

### THE JAPAN LILIES.\*

THESE magnificent Lilies, although for many years in cultivation in this country, are still scarce. The high prices—one, two, and three dollars apiece—at which they have been held, as well as the doubt that existed respecting their fitness for open garden culture, have combined in retarding their dissemination, and confined them to a few of the better class of gardens and greenhouses. Now that prices are reasonable and within the reach of persons of moderate means, and as they have proved perfectly hardy, and as easily grown as the common white Lily, we may expect to see them become really popular. They are the *very* few in this country who will pay two, or three, or five dollars, for a single bulb or a single plant, or who indulge in the luxury of greenhouses and conservatories; but when we can offer a really superb plant, hardy and easily grown, at a moderate price, it finds purchasers and planters by the thousand and the ten thousand.

The Lily has always been a special favorite, and is now. Where can we find a garden without its Lilies? They are all beautiful; and some of those now very common and little thought of—for instance, the *Tiger Lily* (*Lilium tigrinum*), or our native *Superb Lily* (*L. superbum*)—would, if seen for the first time, be pronounced *magnificent*. These Japan Lilies, however, combine the most brilliant colors with a delicious perfume; and this gives them a pre-eminence among the Lily tribe. The *Crimson Lance-leaved Japan Lily* (*L. lancifolium rubrum*)† has a ground color of rosy-crimson, shading off to white at the edge, and having projecting dots of bright crimson. The *White Lance-leaved Japan Lily* (*L. lancifolium album*) is pure white, covered with colorless projecting points. The *Spotted Lance-leaved Lily* (*L. lancifolium punctatum*) is white, with rosy dots. This grows stronger and taller than the others, and blooms earlier, we believe, as a general thing. The height to which the flower-stalks attain varies from two to four feet, according to the strength of bulbs and fitness of soil, culture, &c. They have seeded freely in this country, and large quantities of seedlings have been raised; but nothing new or distinct, that we are aware of, has been obtained.

\* One of the first and best articles that appeared on the culture of these Lilies in this country, was that of Col. WILDER, in Vol. II of *Horticulturist*, pp. 31-41.

† See Frontispiece.

In the open ground we have succeeded well with them in a soil prepared just as for other bulbs — deep, with a liberal proportion of sand and abundance of old hot-bed manure well worked in. Plant either in fall, or early in spring, before they begin to grow. The bulbs should be set about two and a half to three inches deep, as the stem emits roots that greatly increase the vigor and flowering capacity of the bulb. Keep the ground clean and frequently stirred during the season; and when the flowers begin to appear, apply liquid manure freely, especially if the season be dry, as it often is in the autumn when these Lilies bloom. Before winter sets in, cover the bed with a good coat of leaves.

On pot-culture we extract the following very full and plain instructions from the *London Gardener's Chronicle* of November, 1853:

"Let us begin with the bulbs in the condition in which they are usually found in the beginning of November, when they have done flowering. Some of mine have just gone out of flower; others are well ripened, and ready for repotting. But as their treatment after flowering is of great importance, we will suppose they have just dropt their blossoms. Remove them to a rather warm situation, and as dry as you can command, and give them little or no more water. I generally water lightly two or three times after my plants are placed in circumstances to ripen. A warm greenhouse or pit, kept rather close, if not moist, will effect this important desideratum perfectly. As soon as the bulbs are sufficiently matured, which will be known by the decay of the leaves and stems, they had better be repotted; not that this is of importance at present, but it will economise space, and prevent the operation being neglected until after they have made fresh roots. The soil in which they have been growing ought to be entirely removed from the bulbs, and the latter divided as may be thought proper, for there will always be found about the crown of the parent some small bulbs, which may be placed in 4-inch pots. If the ripening process has been complete, the roots will not be troublesome, but if not there will be found a quantity of fresh roots remaining. When such is the case I leave them to themselves for some time longer, for I never pot while I require to cut or break the stronger roots, but merely strip my fingers through them in order to remove those that are decayed. The pots should be just sufficiently large to receive the bulb and strong roots adhering to it; give a moderate watering to settle the soil, and place them in the greenhouse or cool pit. They will require no further attention until the season begins to excite vegetation, when they must be regularly attended to. Water as soon as you see signs of growth, but sparingly until they have made leaves, &c., to draw up and give off moisture. March will generally be found to be the time when they will commence growth. As soon as they are above the soil, remove them to a situation where they will be near the glass and have plenty of air, for after success depends upon getting them strong at this stage. Do not allow them to remain in the small pots in which they were wintered until their roots become matted; the best way of managing this is occasionally to examine them. I always shift into the flowering-pots just as the plants have protruded an abundance of fresh roots against the sides of the pots. For strong bulbs with one stem use 12-inch pots, and for such as produce two stems a size larger. Weaker bulbs, such as produce about seven flowers, will not require pots above 8 inches, and offsets of the first year will not require above 5-inch pots. In shifting into the flowering-pots, be careful to place the crown of the bulbs about 3 inches below the surface of the soil, as they produce a quantity of strong roots from the base of the stem. They ought after potting to occupy a place near the glass; and avoid a warm house if you wish

a strong bloom. As regards watering, they must have a careful supply, neither too much nor too little; but if they can be sprinkled overhead with the syringe before shutting up the house, they will not require much water at the roots for some time. Towards the end of May, if the weather is favorable, they may be placed in a warm sheltered spot out of doors, and ought to have their stems tied to a stake, in order to prevent their being injured by wind. A few plants may be retained in the greenhouse, with a view to have them in flower earlier; indeed, I place some of my bulbs in a moderately close, warm house early in March, and I manage to have them in flower early in August; others I retard, to prolong their flowering until October; but a season's practice will be the best guide in this matter. These Lilies are not liable to suffer from the attacks of insects, but the green-fly will occasionally make its appearance upon such of the plants as may have been kept over warm. If so, fumigate at once with tobacco-smoke, or wash the leaves with weak tobacco-water. I have said nothing about soil, for they are not very particular in this respect. I use fresh fibrous loam and peat in equal portions, with a sufficient quantity of sand to render it porous; if peat cannot be had, use leaf-soil. Some say, however, that the flowers are much higher colored in peat. The only thing requiring further notice is, to be careful of the flowers when you have got them—syringing overhead, or a damp stagnant atmosphere, will spoil them, just as it would a light-colored Camellia flower. I once lost a fine head of bloom in this way. If you are anxious to propagate them, it may be effected by means of the scales of the bulbs. Fill a pan with soil similar to that recommended for growing them in; lay the scales upon the surface, and sprinkle a little fine soil over them; give a little water, and place the pan in a close warm atmosphere. This is, however, a part of the business which had better be left to professional hands, and, except the amateur be proficient in such work, he will not be very successful. If properly managed, they will soon increase by natural means to more than can be accommodated. I may just state, by way of conclusion, that, in my opinion, these fine Lilies have one fault—they produce their flowers too far from the surface of the soil. I have tried to remedy this by placing three smaller bulbs in a pot with the principal one at the first potting, and I think this improves their appearance when in flower. With this exception, they are splendid productions, and deserve the most extensive cultivation; grown in masses in large pots, or in conservatory borders, they are surpassingly grand, and they are quite within the means of the amateur. Don't be satisfied with your treatment unless your full-grown bulbs produce from twenty-five to thirty flowers upon a single stem.—*Autumnalis*."

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### TROPICOLUM LOBBIANUM AS A GREENHOUSE CLIMBER.

BY EDGAR SANDERS, GARDENER TO J. F. RATHBONE, ALBANY.

THE insignificance of this plant under bad treatment, may cause many to question its great beauty as a decorative plant. In my mind, as a greenhouse climber for winter flowering it has few equals, commencing early to put forth its blossoms and continuing them without intermission till late in the spring. Perhaps the following notes of its treatment here may not be uninteresting to a portion of your numerous readers.

The plants when received from the nursery were good, established plants, in 5-inch pots. As soon as obtained (October 31) they were shifted into 11-inch pots, using



two-thirds turfy loam to one-third rotten manure, with sand to make it porous. The pots were well drained—a point of considerable importance. A few slight wires were strung on each side and over the doorways, and as the growth proceeded, carefully tied to them. The first flowers expanded November 20, since which time it has gradually extended its branches, bearing a profusion of flowers. The house has been kept as near 50° medium night temperature as circumstances would allow. The most healthy plant (occupying the warmest part of the house) covers a considerable space, and has often nearly a hundred blossoms open at one time. The more they are cut for bouquets, the faster the succeeding flowers open. Its long footstalks render it an excellent flower for this purpose, while the color of its flowers (bright orange-scarlet) make it an acquisition of no mean importance at this season of the year, when every flower has a charm. The plant is materially assisted by occasional waterings with diluted manure water.

This species does not seed freely, but strikes readily from cuttings, which may be struck in the spring and kept growing out of doors during summer, and flowered in its winter quarters early in the fall. As a summer climber in the open border, it has a great tendency to grow too strong to flower freely, which may be somewhat counteracted by keeping it stinted at the roots.

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## WHAT TO PLANT, AND HOW TO PLANT.

BY OBSERVER.

SPRING is almost upon us; the dreariness of winter is all but passed away; and the lover of gardens and out-door work may already take up his spade to prepare for the coming season. To many the question is, What trees shall we plant this spring? The lover of shade, the admirer of evergreens, those who particularly favor flowers, and others who pay their respects to fruit, are making out their lists. The ignoramus, who has none of these loves or propensities, is about to depend on second-hand information, and to be disappointed in the result. So much has already been written, and by such able pens, on this subject, that an occasional correspondent of the *Horticulturist*, like myself, feels abashed when he thinks of venturing his own bark on the great waters which are continually surging in books and periodicals, about trees and shrubbery, and grass lawns and flowers. Shall I say it, in all humility, that when I began to learn a little about planting, books failed to enlighten me, because I could not understand what I wanted myself. This is the case with the majority of those who plant; they begin when they know comparatively nothing about what they actually want. My own process was to plant a specimen of every thing in the shape of a tree that I could procure; and such as I did not like, or where they stood too near to each other, I cut down when I got tired of them. I wish I could tell all the pleasure I had in these processes; how I followed this authority as to the proper season; how I dug winter holes; mixed earths of "mold;" "planted not too deep,"

with the bole standing on a mound, as well as without; what disappointments resulted; and how I have now a forest of all descriptions, of glorious variety; each in its season dispensing its beauties of leaf, fragrance, flower, or fruit. But this would weary the reader, and I will endeavor to be a little practical rather than egotistical, in imitation of the very good example set me by the Editor of the *Horticulturist*, and his valued correspondents.

First, then, you want shade. If so, plant the Norway Maple; that will give you in a few years, in a good soil, a fine round-headed tree, with a canopy of leaves that defies the sun's penetration, and, in early spring, a glorious display of flowers equal to the Laburnum, and to me more interesting. Here is a shade tree of the first merit bearing flowers; it will satisfy the most fastidious.

When the Tulip tree first bloomed in England, the common people heard that there was an enormous American tree *covered with Tulips!* and they opened their eyes in wonderment at the information. It was just after the Tulip mania in Holland and elsewhere. The excitement was great, and the *Liriodendron tulipifera* was all the fashion. There can scarcely be a handsomer tree, and yet it is not so frequently planted as it deserves to be. It is a good shade tree, but it attains a large size; too large for very small grounds. It is also difficult to remove, having a tap root. Procure it, not from the woods, whence it almost always fails; but from a conscientious nurseryman, whom you can believe when he tells you he has moved it at least once himself.

All the Beeches are desirable, and they have no enemies; their picturesque roots are worthy of study from all admirers of nature. There is now a Weeping Beech, of great beauty. But if you want the most beautiful weeper, (next to the Willow,) get the *Sophora pendula*, which is now coming a little into notice. Apropos of the Willow, (how one rambles when he gets among beautiful trees!) if it had been told us before we ever saw a Weeping Willow, that there was a certain large tree that fell in graceful folds of weeping tresses, like a lady's hair, how far would one not have gone to see it! And, while we are on the subject, let it be remembered that no Weeping Willow tree ever thrived on hard, stubborn ground, that had never been stirred. The best place for it is in deeply worked earth, near to water or a gutter; no better spot can be found than where an artificial bank has been thrown up, say where you have moved your earth to fill a hollow or raise a knoll.

For myself, I am very fond of combining not only beauty of form, and leaf, and flower; but I like to have about me trees which produce something for the children and grand-children to crack or to eat. I, therefore, early in my experiments, planted the true Shellbark, the Walnut, the Chestnut, the Butternut, and the Madeira Nut or English Walnut. What more beautiful shade trees can be invented or advertised? None. Then for products of another kind: all the Crab Apples have great beauty; their flowers are abundant and odorous in the highest degree, and their fruit is invaluable for preserves. The Flowering Apple is really one of the most gorgeous and superb products of nature's laboratory, and may be grafted on the commonest Apple tree; and yet how very rarely do we see it. This and the Flowering Cherry, more

known, may be compared to trees covered with Hyacinths. Alas! neither of these produce fruit. As for the Chestnut, it may be well to remark and *remember* that the finer large kinds of French Chestnuts may be budded or grafted on our native trees; and wherever you already possess these, it is better to do this than to plant anew. I happen to know a kind of old mortality grafter, who goes all about a certain township in Pennsylvania, begging permission to perform this operation, out of pure love of valuable results.

And why should we not have fruit and shade together? Why is not the shade of a fine Cherry tree as valuable as an Ash? Believe me, young planter, it is equally so. If you ever enjoyed the delight of getting up into the body of a big *Ox Heart* or *May Duke*, when a boy, with free liberty to eat till you were sick, you have reminiscences of which I would not deprive you. Have you ever shaken a *Shell-bark* Hickory tree, and carried the nuts home on your back in a large grain bag? Did you ever hull Walnuts, and have black fingers for weeks thereafter, not being aware that soap makes them blacker and vinegar and bran discharges the color? Did you ever go to wild lands in your neighborhood, and bring home a bag of the red wild Plums? If you have performed these feats, the first of your knowledge of the pleasures of acquisitiveness, when you plant will you not think of the succession of young and happy hearts that will climb your plantation for a century to come—perhaps your own descendants—and will you not gratify yourself and *them* by remembering this little list? I have now in my eye two places in the country where I used to be at home. The one was so stocked with Cherries, that everybody within miles and miles was at liberty to come with wagons and tubs, and take as many as they wanted; another produced so many Shell-barks that the market sale of them supplied pocket-money for the year to a famous set of youngsters: and these trees were shade trees in every valuable sense.

It would be very easy, now that my pen has caught the inspiration of the subject, to multiply examples, and to descant on the pleasure of getting two kinds of advantages out of our planting amusements; to increase a list which I have purposely made brief; to descant upon the further amusement of having many varieties of the same kind of fruit on one tree; to say that my best Pears came from new kinds grafted on healthy middle-aged trees of old inferior kinds; and to add that I cultivate some trees and shrubs purposely for the health and attraction of my friends the singing birds, and that few are better than the Buffalo Berry, the two sexes of which should be “worked” on the same stem.

To conclude, dig large holes for everything like a tree; if in clay soil, burn all the shavings in it you can get, before you plant; drain with stones in a deep bottom (this especially for roses); don't put fresh horse manure to evergreens—rather prefer leaf mold, and that not in too great a proportion; manure your fruit trees with a little guano dug in, in spring and fall; in your Pear orchard it will be better not to have a spear of grass grow near the roots, where however a strawberry bed will thrive well and do no injury whatever. I asked a man, last spring, who was apparently every day among his fruit trees, what he was doing. His answer was, “cultivating;” and this



cultivating consisted in stirring the ground, and rooting out every grass and weed root as it appeared, mulching the neighborhood of each tree at the same time, and renewing it as often as needed. That was his first summer in the country; but he will be rewarded as surely as a greenhouse protects tender plants through frosty weather.

The best fruit garden I ever saw in any part of the world, is on Staten Island, belonging to SAMUEL T. JONES, Esq., a distinguished merchant of New York. He has Peach trees as large round the stem as a man's body, all trained in the best manner, and producing beyond all calculation. They are examined twice a year for the worm; and besides rich manure and careful cultivation, are treated spring and fall with a double handful of guano mixed with plaster. His Pear trees are perfect gems. Such *Vergalious* as he has in profusion, produced last year nine dollars a barrel. The borders of his graperies outside the houses are *very large*, and always look like a newly raked, deeply dug, and blackly manured, new bed. No spear of grass to be seen in the whole garden. The results such as would inspire the veriest dullard in gardening with a love of the subject. Two acres reclaimed from stony ground, furnishing enough stone to build a thick, high wall around the whole, is brought into perfect cultivation. It does one's heart good to see such care and nicety. I really believe that two acres thus cultivated with head-knowledge and elbow-labor, produces more in actual money value than many a farm of fifty acres that passes in certain neighborhoods for respectable work. We may see many such a garden in Europe, but how very rarely do we meet with it here. A few years hence we may witness other examples, stimulated by such success.

I hold it to be impossible for a gardener to fully understand his business, and produce the proper effects and results, unless he sees for himself what others have accomplished. An observing visitor never leaves a good garden without having learned something advantageous. At Mr. JONES' he will see the ground very rich, and perhaps come to think that "manure is half a gardener;" he will see every thing in order and in its place; he will, if he asks, learn that the whole garden is dug over *in the fall*, with as much care as in the spring, and left *unraked*; and if he don't know it, can ask the reason therefor. One such visit will do more to open a moleish eye than two to a florist's show. Seeing *how* things are done, is better for a learner than merely seeing the results.

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## KITCHEN GARDENING.

BY THOMAS MEEHAN, GARDENER TO CALEB COPE, PHILADELPHIA.

I was much interested, recently, in the complaint of a brother gardener, that his employer "cared no more for a rare plant than for a bunch of Beets." I merely inquired, "Does he care for the Beets?" This gentleman, it seems, did care for "the Beets;" vegetable-growing was his hobby—vegetable superiority his delight. Now, I honor such a man. There is something workman-like about him which I admire. He begins at the right end. He is a true friend to the gardener; and we shall probably yet hear his place spoken of as one of the most interesting in the land.

It is a sound philosophy which places the *useful* before the *beautiful*. Let a vegetable garden once be well attended to—once become an object of perfection—become a source of pleasure and pride to the proprietor,—and Roses, and Violets, and perhaps even the *Victoria* herself, will not long remain forgotten or uncared for.

A good vegetable grower must not be classed with the mere “plodder.” There is dignity attached to his profession. The plant or fruit grower has not more. The science of his branch is *deep*, and its art affords scope for *high culture*. He has innumerable topics to study ; a great diversity to interest. The soil, situation, and aspect of the garden ; its arrangement, division, and formation, to the best advantage ; its connection with other arrangements for manure, for water, and for general conveniences ; the best situation for permanent crops, and the best places for peculiar ones ; the times and seasons for seed time and planting ; the several culture of each kind to the mutual advantage of both the crop and the ground ; the production of crops at an unnatural or an unusual season, and the preservation of others to a late period ; the faculty of watchfulness for all improvements, either in the kinds of vegetables themselves or in their modes of culture ;—these are among a few of the points to be attended to in successful vegetable-gardening.

To do full justice to each of these heads, would fill a volume ; and there are many excellent volumes on the subject, well repaying perusal. All I propose to do in this chapter, is to call the attention of the novice to a few main points in each ; so that once well directed, he may easily pursue by himself the path to success.

The *best soil* for a vegetable garden is a brown loam, inclining to sand. Other soils may be better for certain crops, but this will be adapted to most, while all can be made to do well in it.

The nature of the *subsoil* is of importance. One impervious to moisture will *not* do ; any other may be tolerated—a bed of brick-earth preferred.

The *situation* should be convenient for access, for manure, and for water ; and have a slight fall to the southeast, and shelter on the northwest.

In its *division* and *arrangement*, the walks should run at right angles ; and, if the garden be of “any” extent, be made of a hard bottom, and wide enough for a cart to pass over. The “squares,” for the convenience of digging, should be square, or in parallel, right angled lines.

In *preparing the soil*, underdraining will in many cases be of advantage, if it can be properly done ; otherwise it “will not pay.” The drains, whether of stone, tile, or brick, ought to be two and a half or three feet deep, and not more than nine yards from each other. Then the benefits of trenching the soil would prove great, especially if about a foot in depth of stable manure be first laid over the surface. There are two ways of trenching : one loosens the soil, say two feet deep, and brings the lowest soil to the top ; the other loosens the soil to the same depth, but leaves the subsoil still at the bottom. The first is employed to renovate worn out soil ; the last is to be used in forming a new garden.

Having got our garden sited, formed, and fixed, the *permanent crops* next call for *location*. We have to deal with Horse-radish, Rhubarb, Asparagus, Sea Kale, herbs,

and sometimes Globe Artichokes. Herbs of all kinds are essential to a well-kept garden, and are usually disposed in odd corners, narrow borders, and frequently as edgings, or division lines. The other articles are best kept by themselves in adjoining beds, all thriving in pretty much the same soil. The Asparagus perhaps relishes a more sandy soil than the others. Rhubarb and Sea Kale should adjoin, for the convenience of early forcing. Small fruits are also considered as kitchen garden crops, and come under the *permanent* class. Here we have Currants, Gooseberries, Strawberries, and Raspberries. These may be in beds by themselves, in near connection with the others. Currants and Gooseberries are frequently employed to adorn the sides of walks, being placed at about nine feet distance from each other. Of the vegetables above mentioned, the Rhubarb alone affords scope for much variety; I prefer the *Victoria*.

The arrangement of the more temporary crops to the best advantage, requires more skill; and, indeed, almost every gardener has some peculiar ideas of his own. As a general rule, green crops—such as Cabbage, Spinage, &c.—should be planned to follow root crops—as Turnips, Potatoes, &c.; though this can not always be done, as some families use more of one kind than others would do, and these again more of the same in one season than in others. I will give a short sketch of my own method; others can vary it to suit circumstances. My most extensive crops are Bush Beans, Celery, Corn, Onions, Peas, Potatoes, Salsify, Spinage, Turnips, Tomatoes, and Lima Beans. My other crops are, therefore, subservient to these. I give these the “first choice” of ground; the others come in where they can. The ground to be occupied with Corn, French Beans, Tomatoes, Lima Beans, Melons, Cucumbers, Squash, Okra, and Egg Plants, not being required before the middle of May, any amount of Spinage, or Radishes and Lettuce, may be raised previously. Then those crops taking the greatest quantity of fresh manure are associated, as the root crops will have to follow them next season without manure. In this class we have the Pea, Potato, Tomato, Corn, Cabbage, Squash, and Lima Bean. I do not specially provide for Celery, as it follows my first crop of Peas; nor for Turnips or Endive, which follow early Potatoes. The early sown crops, for which I manure the previous season, are next located, as the Onion, Parsnip, Salsify, Beet, and Carrot. Besides these I usually grow a few Egg Plants, and a small quantity of Parsley, which usually take “what ground is left.” Now, besides all this, I have to save a piece of ground for my fall crops—Cabbage, Cape Broccoli, Brussels Sprouts, and Savoys.

We will next talk over the best *times* and *kinds* to sow or plant. I couple with the times of sowing the kinds I prefer; it will condense the chapter. Other kinds may do better in some localities. *Early Walnut-leaved* Potatoes require our earliest attention, as soon as the frost is out of the ground, followed closely by *Prince Albert* Pea, *Large Yellow* Onion, *Curled Parsley*, Salsify, Parsnips, *Early Horn* Carrot, *Short top* Radish, *Butter* Lettuce, *Round-leaved* Spinage, *Early York* Cabbage (sown previous September), and *Turnip* Beets. April having arrived, we are ready for *Mercer* Potatoes, *Long Salmon* Radish, more Spinage, *Long Red* Beet, *Long Orange* Carrot, and *Drumhead* Lettuce. May—*Stowell* Corn, Lima Beans, Okra, Bush Squash, To-



matatoes, Egg Plants, Cucumbers and Melons, *Valentine* Beans, *Imperial* Peas, Pumpkins among the Lima Beans, *White Turnip* Radish, and *Large Indian* Lettuce. We are now well off for the season, except sowing succession crops of Peas, Beans, &c., as fast as one crop is well above the ground. The seeds of our fall crops have to be attended to by the beginning of April, when we sow on a light, warm, sheltered border, *Red* and *White Solid* Celery, and, by the end of the month, *Drumhead* Cabbage, Brussels Sprouts, *Purple Cape* Broccoli, *Red* Cabbage, and *Savoy*. The *Strap-leaved red top* Turnip and *Curled* Endive may be sown as soon as the early Potatoes are off—say by the end of August. In September we have to sow, for the next season, *Early Scotch* Cauliflower (where it can be protected) and *Walcheren* Broccoli (nearly hardy), some *Early York* Cabbage, and, on the ground occupied by late Potatoes, some *Prickly* Spinage and a few Onion sets; the two last to be protected from the sun by a little loose straw or litter.

The *preservation of crops* is an important point. Peas and Lima Beans can be had to a late period of the season, in pretty good order, by gathering the half-grown pods, drying them gradually in a cool, shady place, and afterwards keeping them dry and but a few degrees above freezing point. Beets, Carrots, Parsnips, and Salsify, may be kept in any place not damp, and but a few degrees above freezing point, packed in loam or sand. In all these operations, the object is to keep them cool and but just dry enough to prevent evaporation. The above-named roots can be *best* kept packed in hills out of doors, if they can be covered so as to get at them any time in frosty weather. Turnips should always be “stowed away” in this manner; putting layers of soil between every foot in thickness of roots, to prevent fermentation. Tomatoes may be had very good till Christmas, by sowing some so as not to come to maturity till September, then to dig up the plants with their load of green fruit before it has felt the slightest frost, and hang them by their roots in a cool cellar or shed. As they are desired for use, place some of them in a very warm place in the full sunlight for a few days, and they will ripen nicely. Egg Plants may be had a good while by the same process. Radishes may be had very late by sowing a few weeks before frost is expected, and when they are large enough to draw, throw over them a few loose branches or pea-sticks, and on these a little loose litter. The Onion keeps best tied in “ropes,” and hung up in a dry, cool shed, secure from frost. The Endive and *White Cape* Broccoli (sown in April), or *Purple Cape* Broccoli (sown in May), can be had till the end of the year, by being taken up before severe frost, as much soil as possible with the roots, and placed closely side by side in a dark cellar about 40° or 45° of temperature. The Endive will grow and blanch beautifully, and the Broccoli produce fair heads. Cabbage and Celery preserve best in the open air. The former may have their heads buried and the roots left out of the soil, which will effectually prevent water getting in to rot the hearts. The latter may be taken up before severe frost, and laid down horizontally, with their roots against a wall or fence, then a layer of sand or soil, another layer of Celery, and so on till completed; the whole to be covered with litter, and kept dry.

I will conclude with a few remarks on *forcing*. Peas can be had where there is

plenty of light, and the temperature never higher than  $50^{\circ}$ ; but they take so much room that they scarcely "pay." Sown in this way, in boxes, I have succeeded in having as good crops of them in March, from the stalks, as could be had in the open air in their season. Bush Beans can be had in eight weeks, in a temperature of  $60^{\circ}$ , and plenty of light, grown three together in 6-inch pots. Asparagus may be had all the winter, by taking up the roots (strong ones) in the fall, and planting them anywhere so that a temperature of  $50^{\circ}$  or  $60^{\circ}$  can be commanded — under a greenhouse stage, for instance; but the more light their place of growth, the better the crop will be in quality. *Early Horn* Carrots, sown in February, and protected from severe frost, will come into use weeks before the general crop. Radishes may be had very early, with a gentle bottom heat; but they must have an abundance of air, or more leaves than roots result. The Potato, like the Radish, requires an abundance of air, and a temperature not above  $55^{\circ}$ . Radishes may be sown with Potatoes, in fact. Cauliflowers also want much air. They can then be had very early and fine, on a good bottom heat of leaves or dung, in pits out of doors; and are, in my estimation, the most productive of forced vegetables. The Cucumber and Tomato can be had easily wherever the temperature is above  $60^{\circ}$ ; but not well together, as the former does best in a moist heat, while the latter will set its fruit only in a dry one. Lettuce can be grown under the same condition as Radishes. Rhubarb and Sea Kale may be had very early, by being forced on the ground where they grow. An enclosure being formed, boards nailed together forming square trunks about two feet long placed over each root, and about three feet of stable dung or leaves placed over the whole, is all that is required.

I hope my article is not too long; and yet I have but pointed to the cabinets in which kitchen gardening locks up her secrets, though I have endeavored at the same time to supply novices with the keys that open them. I will only add that the experience on which the above notes are thrown together, renders them applicable especially to Pennsylvania.

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## PRUNING AND MANAGEMENT OF THE PEACH TREE.\*

### III. *Training the Principal Branches.*

99. This, to speak properly, is the first nailing which is made after the winter pruning. It consists in fastening to the wall, or trellis, all the principal branches of the tree. By this operation we give the Peach tree the regular form that it ought to present, maintaining its branches at proper distances and in a suitable position. The earlier the pruning, the more important it is to train in the branches immediately; because, should a sudden change in the temperature take place, its bad effects are not so much felt by the tree when nailed, and protected by the copings, and by straw mats in the worst aspects. It is absolutely necessary that all the wood-branches

\* Continued from February number.

should be trained in a perfectly straight line, because the least curve might draw the sap to the shoots that may be there, and give them a disproportionate strength, and thus render them troublesome. Training in the principal branches is of greater importance on this account than on that of its giving a regular appearance to the tree. Although this operation appears very easy, it is not without its merit when well done; and sometimes we can not do it well at the first attempt. The intelligent cultivator, who is fond of his calling, never hesitates about going over his work a second time, in order to give it the desired regularity.

100. This training affords an excellent opportunity of restoring the balance of strength between two wings, one of which is stronger than the other; as also between principal branches on the same wing, where the sap does not circulate equally. To attain this end, it is sufficient either to nail the stronger part closely against the wall to hinder its growth, or to give greater liberty to the feeble part; so that, being more freely surrounded with air, the vigorous development of its shoots may be promoted. These two means may be employed separately or combined, according to circumstances. Sometimes we even bring the weak side forward from four to eight inches from the wall, supporting it by props placed for that purpose; and when the equilibrium is restored, it is put back in its place. This method must only be adopted when there is no longer any fear of frost.

101. Again, in training the branches of the Peach tree, we can fasten the weak part more vertically and the strong more horizontally. The sap consequently flows with greater force into the former, and the balance is restored. These two means may be employed at the same time on young trees; but in those which have attained their full growth, it frequently happens that we can not bring the strong part any lower, and in that case our only resource is to train the weak part more upright. The use of these various modes ought to cease as soon as a more even distribution of the sap has rendered the respective parts equal.

102. In order to facilitate the operation of training, and to give it the desired regularity, we fix guides on the wall, or trellis, so as to regulate thereby the position of the principal branches. These guides are taken away when the formation is complete, and the branches are then maintained in the place assigned to them.

#### IV. *Nailing.*

103. The nailing consists in fastening all the branches of a Peach tree, whatever their nature may be, in the place most suitable to them. The regulation or training of the principal branches, which has just been treated on (99), is, properly speaking, the nailing of them.

104. But nailing, as I understand it, is chiefly applicable to the fruit-branches, and to the shoots as soon as their growth requires it. It will thus be perceived that we may carry on the nailing of the tree throughout the whole course of its existence; nevertheless there are two periods of the year more especially devoted to this operation — namely, when the tree is without foliage, and when it is furnished with leaves. Hence the operation is distinguished as winter-nailing and summer-nailing.



105. At Montreuil, woolen shreds and nails are used in training and nailing. These shreds surround the part to be fastened without becoming so tight as to cause strangulation. For this reason neither linen nor cotton rags are employed, as they contract or expand according to the quantity of moisture they absorb; and because, from their not allowing the nails to pierce them readily, we can not well calculate the tension which we wish to produce.

106. When there is a trellis, we train the principal branches upon it, fastening them with osiers. The fruit-branches and young shoots are tied with rushes. In gentlemen's gardens, guides, of which I have before spoken (102), are fixed to the trellis; and also a rod at each side of every principal branch, and parallel to its direction. The above is a convenient way of training the fruit-branches in their proper place, which could not always be done if they happened to be opposite the openings of the trellis.

107. Latterly some walls have been covered with trellises of iron wire. I prefer those made of wood; but if the iron ones are used, guides must be employed for training the principal branches; and when they are fastened to such trellis, care must be taken to wrap the wire several times round with osier, so that the branches may rest on the latter, in order to prevent their bark from being bruised and rusted by the iron.

108. A, *Winter-nailing*. This is the first operation performed after the winter-pruning, and the training of the principal branches. All the fruit-branches are fastened in the place they should occupy, having due regard, at the same time, to their form and strength.

109. It has been shown (100) that the growth of a wood-branch, likely to become too strong, is diminished by close training, and keeping it in a confined position; and that, on the contrary, it may be roused from a state of languor by giving it greater liberty. Nailing acts in the same way on the fruit-branches. The restraint that can be produced by nailing has beneficial effects chiefly on the upper sides and near the extremities, where vegetation is always more active, and which ought to be the more restrained, as it tends to increase the distance of prominent eyes from the place where the branch takes its rise. On the other hand, the branches on the lower side must be so nailed as to be in the best position to allow of a free flow of sap. The fruit-branches must be nailed near enough the principal branches to shade them with their leaves from the sun, and so that no naked spaces may exist. In short, with a few exceptions, among which are the fruit-branches that require to be constrained, all the fruit-branches ought to form, with the branch that gives rise to them, a rectilinear angle of greater or less extent.

110. Whatever care or foresight may be used in maintaining a supply of fruit-branches, naked spaces may occur on principal branches, more especially on their under sides. Such cases may be remedied in the following manner:

At A, fig. 10, a naked space may be seen on the upper and under side of the branch. In order to fill it, the fruit-branches *a, a*, situated on each side, and immediately beneath the naked space, are left, when pruned longer than usual, and are allowed to

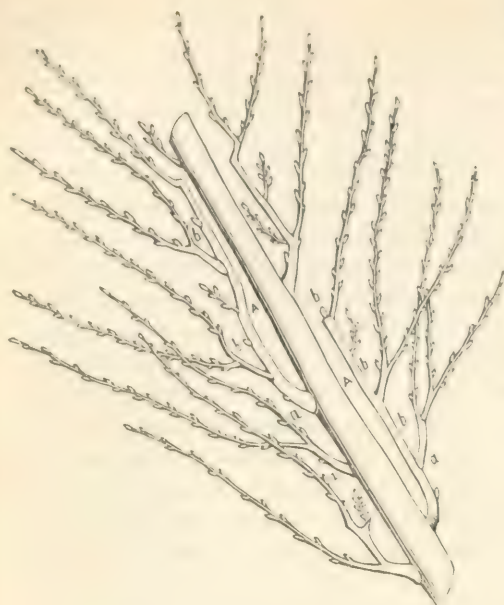


Fig. 10.

grow to the required extent. I suppress all the eyes in the intervals of the three shoots *b, b, b*, and I encourage the growth of the latter, in order to convert them into fruit-branches. When these are obtained, and the branches *a, a*, trained as near as possible to the principal branch that bears them, no naked space appears, and the branch is as well covered at this place as elsewhere. The three shoots *b, b, b*, are treated in the same way as the fruit-branches; and being successively replaced, like them, they produce fruit equally as well. This simple proceeding is advantageous in two ways; it prevents the branch from being naked, and it affords fruit from the three fruit-branches on

each side, of which we should have been deprived if this proceeding had been neglected. Ten years ago, at Andilly, I had occasion to cover, in this way, some principal branches that were naked to a very great extent. In order to do so, I allowed a young branch, trained in the above-mentioned way, to grow along the naked branches, securing it close to the latter by including both in the same fastenings. In this way the naked branches were covered, while the means employed were scarcely perceptible.

111. We now readily cover naked portions of branches by means of inarching. It is thus performed:—Part of the end of a young shoot originating below the naked part is trained along the naked branch; we raise from the latter a strip of bark as broad as the thickness of the shoot, and about an inch and a quarter in length, and we apply to this barked portion a part of the shoot sliced to half its thickness, with an eye in the middle. The inarched shoot is secured with worsted, leaving the top of the shoot free. This operation may be performed from April to August. In the following spring, early or late, according to the state of vegetation, the inarched shoot is divided from its original base immediately below where it was united to the naked branch; and no more scar is left than results from a shield-bud.

112. It may happen that during the winter-nailing it is necessary to suppress useless eyes. Instead, however, of entering into details respecting that operation, it will be better to proceed with the subject in hand.

113. *B. Summer-nailing.* The summer-nailing consists in fastening to the wall, when needful, those young shoots made by the wood-buds subsequently to the winter-pruning and nailing.

114. Whenever we have time we ought to follow step by step the growth of the young shoots, so as to nail them according to their strength, the place they occupy, what they are intended for, and with respect to their relation to the other young productions: but, as before said, the cultivators are too much engaged to take such minute precautions.

115. This being the case, the greater number of them allow the young shoots to grow promiscuously until it becomes necessary to put an end to their disorder. They then proceed to make a general summer-nailing, which is usually done between the middle and end of June. As the nailing goes on, all the nails used in training the principal branches, and in the winter-nailing, are pulled out, in order to use them afresh. This proceeding gives freedom to the branches, which sometimes remain in their places. It also economises nails, prevents the tree from being galled, and some of the fruit from being injured by nails pressing against them. It often happens, especially in young Peach trees, that in training them after the winter-pruning a sufficient inclination can not be given to the principal branches for fear of breaking their bark at the origin of the branch. If that be the case, we unnailed the tree in order to bring these branches down to the proper place, which can be done with greater ease when they are rendered more flexible by the flow of sap. Under these circumstances the main branches are not always strong enough to support the secondary branches loaded with leaves and fruit; therefore, before completely unnailed the tree, they must be tied to each other, at a foot from the stem, with strong osiers to prevent them from splitting. The bark of the main branches should be protected from the pressure of the osiers by a piece of cork. Even in old trees, where all the principal branches after being unnailed would remain in their right position, it is still advisable to support each of the two main branches by one or two nails and shreds. It is of course understood that all the ties of a tree on a trellis, which were made at the winter-nailing, must be cut as the summer-fastening proceeds.

116. In this operation all the young shoots that are situated towards the extremities of the principal branches, and those on the fruit-branches, are nailed or tied in the right direction, at proper distances, and without confusion. In summer-nailing we always begin at the upper part of the tree, and work downwards.

117. The summer-nailing produces the same effect on the young shoots that the winter-nailing has on the fruit-branches, according as more or less freedom is allowed them. Therefore, if it is desirable to increase the growth of a young shoot, we give it greater liberty in nailing.

118. After having first nailed the upper parts, which are always further advanced than the lower, by reason of the natural inclination of the sap to ascend, there are cases where we leave all the lower parts at liberty during ten or twelve days, thereby increasing the strength of these parts, and equalizing it with that of the upper shoots.

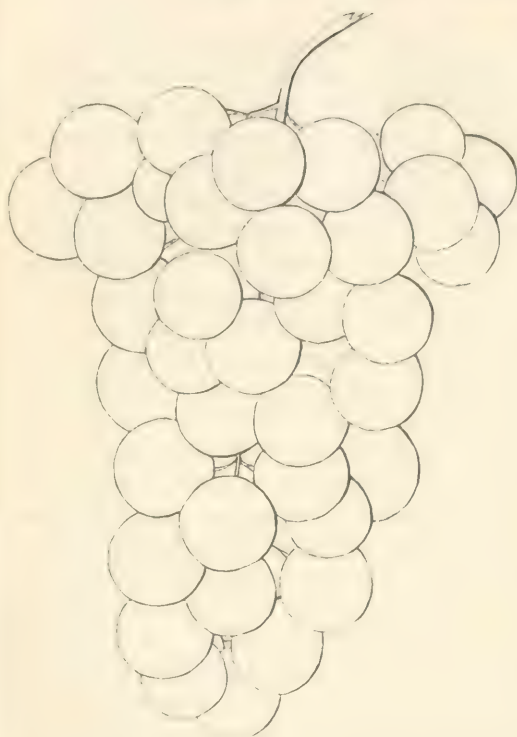
119. During the winter-pruning it is sometimes necessary to remove superfluous eyes; and, during the summer-nailing, pinching, disbudding, and summer-pruning, are requisite operations.

*(To be continued.)*



## THE COWAN GRAPE.

BY W. H. BAILEY, PLATTSBURGH, N. Y.



ANNEXED is a drawing of the *Cowan* Grape—a variety which, although not of the highest quality, proves very valuable *here* on account of its extreme hardiness and early maturity. It was brought to this place by Judge COWAN, of Saratoga, (whose name it bears,) about twenty-five years ago; and, although not very widely spread, has been cultivated ever since. It is quite distinct from the *McNeil*, with which it is sometimes confounded, having shoulders and consequently larger bunches.

The bunches are of medium size. The berries are small, black, with a deep bloom, pulpy, juicy, with a very pleasant flavor. The shoots are long-jointed and strong. The leaves are very large and thin.

## THE CONCORD GRAPE.

BY JOSEPH BRECK, BOSTON.

I wish to invite your attention to a new seedling Grape, which has been raised in this vicinity, and which, I think, will be a valuable acquisition to the country. It was originated by E. W. BULL, of Concord, in this State, who has been engaged for some years in raising seedlings from our native Grapes, and is the second remove from the wild type. It has been in bearing four years, and has proved constant to its quality, and has ripened a full crop on the open trellis when the *Isabella*, *against the house*, has failed to ripen a single bunch. It ripens one month before the *Isabella*—its full season being the 10th of September—and the first ripe bunch of this season was shown at the room of the Massachusetts Horticultural Society on the third of September. It is large in bunch and berry, of a beautiful ruddy black, covered with a

dense blue bloom, with a very thin skin, very tender and juicy, with hardly any pulp; and a fine aromatic taste, instead of the musky flavor of the *Isabella*, and is certainly superior to that variety in quality, while it is fully equal to it in vigor of growth and abundant bearing. Wine has been made of this Grape, of excellent quality, having a delicate aroma, and an agreeable fruity taste.

The want of a Grape which shall be early, hardy and prolific, while it is good for the table and wine, has long been felt in this northern part of our country; and I believe this Grape of Mr. BULL's will meet that want, and as it is as easy of culture as it is hardy, will come within the views of all who wish to cultivate the Grape.

[If the *Concord* should really prove, on further and more extended trial, to be not only very much earlier than the *Isabella*, but quite superior in quality, it will be a great acquisition; but it strikes us as somewhat remarkable that it is free from the foxy perfume of our native Grapes.—ED.]

## SYNONYMS, SEEDLING GRAPES, &c.

BY HON. M. P. WILDER, PRESIDENT OF THE AMERICAN POMOLOGICAL SOCIETY

SYNONYMS.—As I desire to correct errors in the nomenclature of fruits, whenever in my power, I send you a few extracts taken from my memoranda of 1853, on Pears.

*Triomphe de Hasselt* is the *Grosse Calebasse* of LANGEЛИER, the *Van Marum* of BIVORT, and probably the old French *Grosse Calebasse* of NOISETTE. A monstrous russet fruit. Flesh—coarse. Flavor—inferior. Decaying soon at the core. Ripens in September.

*Kartofel*, or *Cartofel*, proves to be *Colmar d'Aremberg*.

*Beurre Van Mons*, or *B. de Mons* of LANGEЛИER, is synonymous with the old *Fondante Van Mons*.

*Blanc péné* of LANGEЛИER, is *Leon le Clerc de Haval*. Sometimes a dessert Pear, on dry, rich, calcareous soils; but scarcely fit for the table.

*Seigneur d'Esperen* is synonymous with *Bergamotte Fievé*, *Belle Lucrative*, and *Fondante d'Automne*. The former is the original and true name, the *Seigneur* having been raised by Major ESPEREN, of Malines, about forty years since, and promulgated some years afterwards in France under the false name of *Doyenne d'Automne*.

*Van Assche* and *Vanaesse*, as stated in your article in the February number, 1853, proves to be *Van Assene*, raised by M. BOUVIER about thirty years since, and of which I have an original plate. By a curious error it received the latter name through scions sent to this country; namely, the transformation of *ch* in the former to *en* in the latter—from *Van Assche* to *Van Assene*.

*Beurre gris d'hiver*, of LANGEЛИER, is the *Beurre gris d'hiver nouveau*, or *Beurre du Lucon*, of the French and Belgian collections. A Pear which originated in France; there known and sold at a common price long before it was advertised by M. LANGEЛИER as a new variety.

**NATIVE GRAPES.**—One word as to native Grapes, and my offering for the present shall be closed.

Among those which have come to notice recently in this region, may be named — *Stetson's No. 1*, *Ames'*, *Bull's*, *Richardson's*, and *Davis' Seedlings*. These are all earlier than the *Isabella*, but with the exception of the two first have a slight touch of the foxy odor, either in fragrance or flavor. The *Richardson*, although a seedling from the *Catawba*, which, by the by, is the parent of many new varieties, ripens about the 1st, and the others from the 10th to the 20th of September.

I am happy to know that attention has at last been awakened on the subject of raising native varieties of the Grape, adapted to our own locations. Of these I have tested more than twenty sorts which have lately fruited in New England, and I can no longer doubt that we shall soon be abundantly supplied with American Grapes of excellent quality.

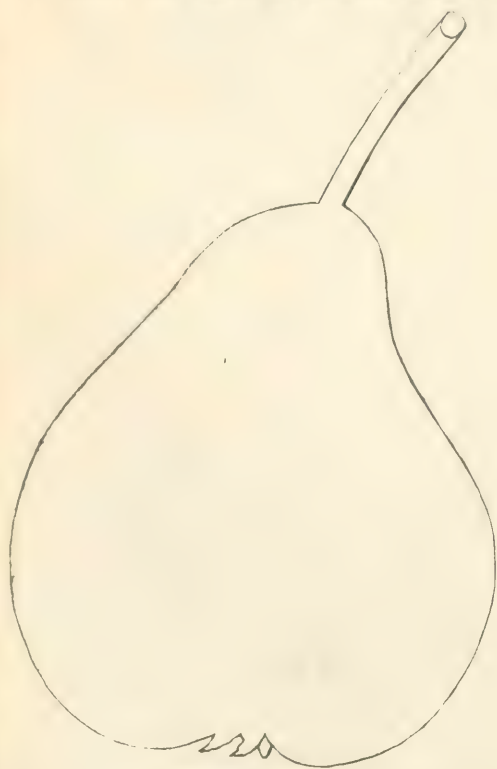
**N. B.**—If the *Brincklé* Grape should prove perfectly hardy, it will take a high rank among the *natives*.

**P. S.**—I find that in my article on New Pears, in your last number, I omitted

to give the description of the *Beurre Jules*. Here it is:

**BEURRE JUDES.**—Size—medium. Form—pyriform. Calyx—open, in a furrowed basin. Stem—rather long, inserted without depression. Skin—dull yellowish-green, rough and thick, russeted, and stippled with coarse dots. Flesh—melting and buttery. Flavor—sweet, rich, excellent. Season—early in October, of short duration. Core—medium size. Seeds—numerous, long, sharply pointed.

The *Beurre Jules* has been exhibited for some years, both under this cognomen and that of *Longue de Maukoty* (should be *Longue de Nakourts*). The former is correct, as we infer from the foreign catalogues. It is described in *Hovey's Magazine* in 1851 as "without much flavor; rots at the core. It has proved with us a very good fruit, but liable to quick decay."



BEURRE JUDES.

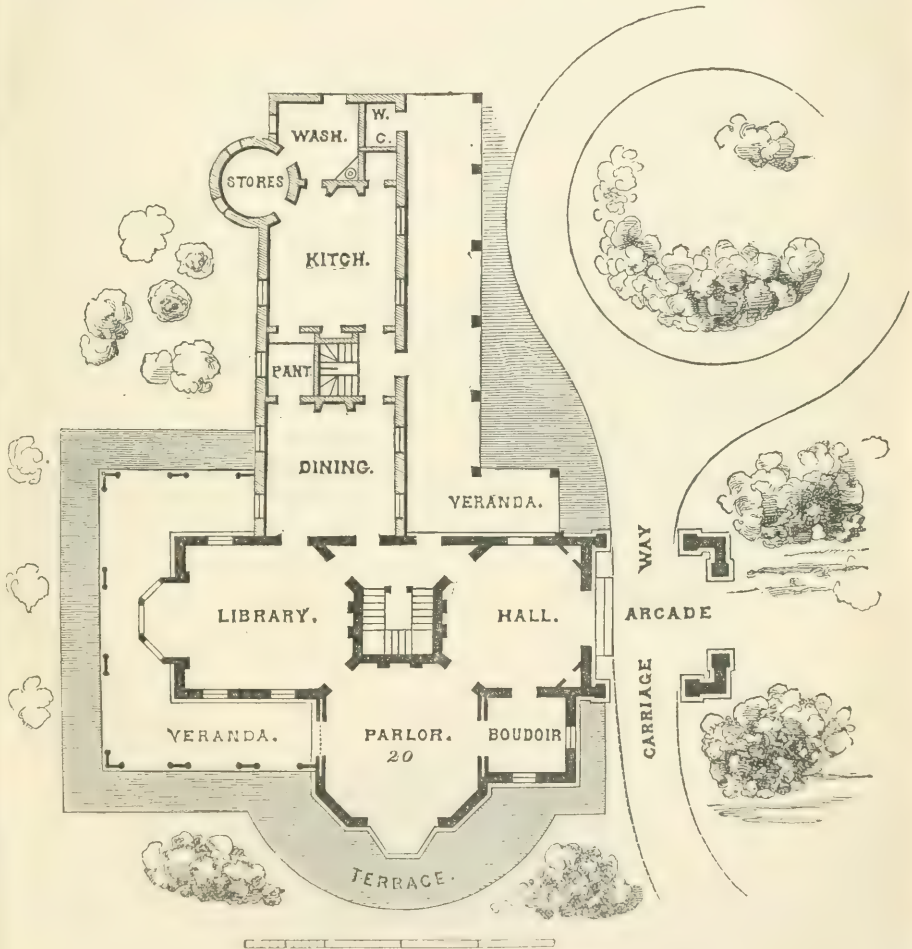


## BELMONT.

RESIDENCE OF J. V. D. BERRIER, M. D., NEAR BELLEVILLE, NEW JERSEY.

BY ALEX. J. DAVIS, ARCHITECT, NEW YORK.

A SECOND example is here given of the Americanized Italian Villa, an irregular, picturesque form of house, having the octagon tower, square turret, covered carriage way, and veranda; but in a different composition from that published in the January number of the *Horticulturist*.



GENERAL PLAN OF HOUSE AND GROUNDS.

The dimensions may be taken with sufficient accuracy from the scale under the plan. From the arched carriage way you enter an octagonal hall. On the left is a

parlor, in the tower, communicating by sliding doors with a small boudoir in the turret; and similar doors open on the opposite side, into a veranda on the west. On the right, in the hall, is a casement window, opening into the back veranda, sheltered by two sides of the building; and having a southeastern aspect. Also, upon the right, is a door, leading to the stair vestibule, library, dining room, and kitchen, with its offices. The round turret (having a stove room below and a water tank above) adds much to the picturesque character of the house, and is seen in our view on the left. The parlor and library have each a bay window, but differing in form. That of the parlor has a balustraded balcony over it, the window of the second story room opening into it, and commanding a pleasing view over the lawn and river.

The second story of the part made black on the plan, contains four bed rooms; three with sky lights, (adding much to the cheerfulness,) as well as side windows, and ventilating valves in the chimneys; and in the turret is a dressing room. The back building (a lighter tint on the plan) also contains four bed rooms, a bathing room, and closets.

The octagon tower has a fine room in the third story, lighted on four sides; it has a lantern in the ceiling. This room, being intended for a museum of the fine arts and the sciences, is connected with an astronomical observatory at the top of the square turret. This turret commands one of the finest views in the state of New Jersey—the Passaic river and adjacent grounds, Newark, Bloomfield, and the Orange range of mountains, with Eagle Rock and its *villa rustica*, the residence of L. S. HASKELL, Esq., the former proprietor of Belmont, who erected the buildings, and planted the grounds.

We shall give a view of *villa rustica* in a future number.

The walls of Belmont house are of brick, laid hollow, with sand stone trimmings, and stucco, blocked and colored as light sand stone to match. The sashes are painted imitation bronze, a dark green, as are also the verandas—a very important feature in houses of this character, and giving a quiet dignity amid its playfulness. The cost of this house was about \$10,000.



## Foreign Notices.

A GIGANTIC CALIFORNIAN EVERGREEN TREE—THE WELLINGTONIA GIGANTEA.—Under this imposing title the *Gardeners' Chronicle* notices a new tree discovered by Mr. WILLIAM LOBB, well known as the collector of the Messrs. VEITCH. This is probably the most magnificent tree of the Californian forests; and the fact of its being discovered, named, and introduced in England before we have heard a word of it in this country, shows how far we are behind England in botanical and arboricultural enterprise. Long ago our government should have sent competent collectors to explore the vast forests of California and Oregon, and bring their treasures to the light of day. Had they done so, this gigantic evergreen might have been known under an American instead of an English name. As it is, however, we rejoice to hear of its introduction. We copy the following account of it from the *Gardeners' Chronicle*:

"When the unfortunate DOUGLAS was last in California, he wrote thus in a letter to Sir WM. HOOKER, of a coniferous tree inhabiting that country: 'But the great beauty of Californian vegetation is a species of *Taxodium*, which gives the mountains a most peculiar, I was almost going to say awful appearance—something which plainly tells us we are not in Europe. I have repeatedly measured specimens of this tree 270 feet long and 32 feet round at three feet above the ground. Some few I saw upwards of 300 feet high, but none in which the thickness was greater than those I have instanced.' What was that tree? No seeds or specimens ever reached Europe, although it appears that he possessed both.

"The late Professor ENDLICHER referred DOUGLAS' plant to *Sequoia*, calling it *gigantea*, and framing his distinctive character upon the representation of a supposed *Taxodium sempervirens*, figured in HOOKER's "*Icones*," t. 379, from DOUGLAS' last collections. But that plate, although with neither flowers nor fruit, represents beyond all question a branchlet of *Abies bracteata*. It is therefore evident that no materials exist for determining what DOUGLAS really meant by his "*Taxodium*," which may or may not have belonged to that genus, or, as ENDLICHER conjectured, to *Sequoia*. But species in natural history can not be founded upon conjecture.

"The other day we received from Mr. VEITCH branches and cones of a most remarkable coniferous tree from California, seeds and a living specimen of which had just been brought him by his excellent collector Mr. WM. LOBB, who, we are happy to say, has returned loaded with fine things. Of that tree Mr. LOBB has furnished the following account:

"This magnificent evergreen tree, from its extraordinary height and large dimensions, may be termed the monarch of the Californian forest. It inhabits a solitary district on the elevated slopes of the Sierra Nevada, near the head waters of the Stanislaus and San Antonio rivers, in lat. 38° N., long. 120° 16' W., at an elevation of 5000 feet from the level of the sea. From eighty to ninety trees exist, all within the circuit of a mile, and these varying from 250 feet to 320 feet in height and from 10 to 20 feet in diameter. Their manner of growth is much like *Sequoia* (*Taxodium*) *sempervirens*, some are solitary, some are in pairs, while some, and not unfrequently, stand three and four together. A tree recently felled measured about 300 feet in length, with a diameter, including bark, 29 feet 2 inches, at five feet from the ground; at eighteen feet from the ground it was 14 feet 6 inches through; at one hundred feet from the ground, 14 feet; and at two hundred feet from the ground, 5 feet 5 inches. The bark is of a pale cinnamon brown, and from 12 to 15 inches in thickness. The branchlets are round, somewhat pendant, and resembling



a Cypress or Juniper. The leaves are pale grass green; those of the young trees are spreading, with a sharp acuminate point. The cones are about 2½ inches long, and 2 inches across at the thickest part. The trunk of the tree in question was perfectly solid, from the sap-wood to the center; and judging from the number of concentric rings, its age has been estimated at 3000 years. The wood is light, soft, and of a red-dish color, like Redwood, or *Taxodium sempervirens*. Of this vegetable monster, twenty-one feet of the bark, from the lower part of the trunk, have been put in the natural form in San Francisco for exhibition; it there forms a spacious carpeted room, and contains a piano, with seats for forty persons. On one occasion one hundred and forty children were admitted without inconvenience. An exact representation of this tree, drawn on the spot, is now in the hands of the lithographers, and will be published in a few days.

"What a tree is this!—of what portentous aspect and almost fabulous antiquity! They say that the specimen felled at the junction of the Stanislan and San Antonio was above 3000 years old; that is to say, it must have been a little plant when SAMSON was slaying the Philistines, or PARIS running away with HELEN, or ÆNEAS carrying off good *pater* ANCHISES upon his filial shoulders. And this may very well be true, if it does not grow above two inches in diameter in twenty years, which we believe to be the fact.

"At all events, we have obtained the plant. The seed received by Messrs. VETCH has all the appearance of vitality; and since the tree is hardy and evergreen, it is a prodigious acquisition. But what is its name to be?

"Are the plants of LOBBE and DOUGLAS identical? Possibly, no doubt; for DOUGLAS reached lat. 38 deg. 45 min. N., and therefore was within the geographical range of LOBBE's discovery. But it is quite as possible that he meant some other tree, also of gigantic dimensions; and it is hardly to be imagined that so experienced a traveler would have mistaken a tree with the foliage of a Cypress and the cones of a Pine for a *Taxodium*, and still less for the species *sempervirens*. Besides, the slenderness of the specimens he saw is greatly at variance with the colossal proportions of the plant before us. That, at all events, the latter can not be regarded as a *Sequoia* we have explained in another column; and we think that no one will differ from us in feeling that the most appropriate name to be proposed for the most gigantic tree which has been revealed to us by modern discovery is that of the greatest of modern heroes. WELLINGTON stands as high above his contemporaries as the Californian tree above all the surrounding foresters. Let it then bear henceforward the name of WELLINGTONIA GIGANTEA. Emperors and kings and princes have their plants, and we must not forget to place in the highest rank among them our own great warrior.

WALKS ON HILLY GROUND.—In a season like the present, when heavy drenching rains succeed each other in quick succession, the comforts of a good gravel walk can scarcely be over-rated. It is, therefore, a serious drawback when paths are not good; and there are many that are not so, owing as much to the injudicious manner in which they have been made, as to the indifferent materials of which they are composed; but there are walks likewise with which in ordinary weather no fault can be found, but which after heavy rains present a guttered and broken appearance. Such walks are those on hill sides, when the water is sure to break them up into gullies, more or less deep. Now, to obviate this defect, many walks are provided with outlets at the sides, where the water is caught by an earthenware pipe, which conveys it to some subterranean channel. Now these outlets, or eyes as they are called, are, to say the least of them, but clumsy appurtenances to a walk; and they must be pretty numerous, otherwise the accumulation of water does all the mischief they are intended to remedy. Any plan, therefore, that would bind the walk together, so as to resist the flow of water, without at the same time rendering it unpleasant to walk upon, must be an acquisition, provided it be capable of general application. Now, the following, though possibly nothing new, will effect this object:—Pound some good lime, (not slake it), and convey some of it to the damaged walks; then mix it with the gravel in something like the proportion of one part lime to four or five of gravel. A small quantity only ought to be mixed at a time with water, and then laid on immediately, beating and smoothing accordingly; then another quantity; and so on, until the whole is done. The mass by this

means becomes so consolidated that it is years before water can have any effect upon it, the process being in fact what builders call "cementing," and one which I certainly like better than asphalt, besides being so much cheaper; for in districts where lime is plentiful and good, it may be used less sparingly: but it is not an expensive affair at any time; and to those who have been suffering from the effects of thunder showers and other heavy rains, I advise a trial of a little of it in the most exposed place, and I think I may warrant its answering.—*Vindex, in Gard. Chron.*

**NEW BEDDING PELARGONIUMS.**—Numerous attempts have been made for many years, to grow and bloom satisfactorily in the beds of the flower garden what is usually called "the section of *Show Pelargoniums*," but almost universal disappointment has resulted. For in a rich soil the plants produce a vast excess of foliage and few flowers; and in a poorer soil, the plants being proportionately weakly, produce slender shoots, and but a few small flowers. During the last two years the plan of plunging the plants in pots, by digging a hole in the bed where the plant was to stand, but nearly double the depth of the pot, and only so wide as to fit the size of it; the plant, in its pot, is then inserted in such a manner that the rim of the pot is level with the surface of the bed, thus leaving a vacuity of several inches in depth below the bottom of the pot. Attention to watering is required, the same as if in the greenhouse, and the plants bloom more freely than if turned out of the pots; but the method is attended with much care, and they do not continue blooming long, and must be replaced by a succession from another source. What was wanted was a number of *Show Pelargoniums* (viz. such as are seen at our metropolitan exhibitions), that, being planted in the open ground, would bloom profusely during the entire summer. We have long had the *Pelargonium Diadematum* and *Sidonia*, both dwarfish growers and free bloomers, in beds, but not of approved shape. The gardener of Mr. JAMES ODIER, in France, has for a few years been endeavoring, by impregnating these kinds by patterns from the best formed and most striking varieties of the *Show Class*, and has succeeded in an admirable manner. Already twenty most beautiful kinds have been sent out, many of which have a very strikingly distinct spot, or blotch, in the centre of each of the five petals. They are of dwarfish habit, profuse bloomers, and of superb form. The one we here give a representation of, its size and marking, is named *P. Auguste Miellex*; it is remarkably handsome. The upper petals have a large clouded blotch of nearly black crimson, with a broad belt of carmine, and a light margin. Each of the three lower petals have a very distinct dark spot, edged with orange; and the white ground of the rest is beautifully *chequered* with orange-red and white edging, while the centre is tinged with violet. Every flower garden ought to have beds of these superb varieties; they may now be procured in our own country.—*Gardener's & Naturalist's Almanack (London).*



THE *Gardeners' Chronicle* states that the *Diervilla Canadensis*, a plant abounding here in uncultivated ground, has been found, by a young Scotch botanist, growing abundantly in a wild state in the Highlands of Scotland.

## Editor's Table.

**HINTS FOR THE SEASON.**—The winter over a great portion of the country has been very changeable, and on the whole what may be called severe upon trees and plants ranked as tender; yet up to this time we are not aware that fruit-buds have suffered seriously, but the most trying periods for these are coming.

Mistakes are often made in uncovering trees and plants too early—subjecting them to cold, biting winds, and the blighting influence of warm days and cold, frosty nights. We advise a *slight* covering to remain until the weather be soft and genial.

Pruning should be completed as soon as possible, so as to be out of the way before transplanting and general garden work comes along.

A sure foundation for successful gardening during the coming season, is to be well prepared to execute every operation promptly in its season. Seizing the very first opportunity for planting, and taking time to do it well, is a certain means of success.

Hot-beds for forcing early vegetables, raising plants for the kitchen garden, and propagating soft-wooded plants for bedding out, will be among the important operations of March requiring hourly attention.

Laying turf, mending lawns, &c., where neglected last fall, should be attended to as soon as the frost is out of the ground, to give the grass the advantage of a vigorous spring growth that will put it out of danger from drouth.

Roses, flowering shrubs, &c., should be pruned and dressed. Many people suppose that Rose bushes and shrubs when well established may be left to themselves; and the consequence is, they become bushy and twiggy, the growth is feeble, and the flowers indifferent. They need frequent prunings, and top dressings of good rich compost about their roots, to give them vigorous growth, luxuriant foliage, and a profusion and perfection of bloom. In pruning both shrubs and Roses, it should not be forgotten that some produce their blossoms on young wood, and some on wood of last year. In the latter case, a sufficient quantity of flowering wood must be left, cutting out the older parts.

**THE GEN. HAND PLUM.**—A minute and accurate account, as we believe, of the origin of this Plum was given by Mr. C. G. SIEWERS, of Cincinnati, in Vol. 6, page 187, of the *Horticulturist*. This was the first and only satisfactory account of its origin that has appeared, to our knowledge. Mr. FAHNESTOCK, of Syracuse, has on various occasions brought this Plum before the public, and in a late number of the *Country Gentleman* brings it up again, saying that “there seems to be a lack of knowledge in regard to it, or else a disposition to throw into obscurity its true history.” Then he says that the late Mr. DOWNING, in his description of this fruit in the *Horticulturist*, Vol. 6, page 21, ascribed its origin to Maryland, and that P. BARRY, in *The Fruit Garden*, endorsed this error. We must correct Mr. FAHNESTOCK. Neither Mr. DOWNING or P. BARRY has ascribed its *origin* to Maryland, but merely stated that Messrs. SINCLAIR & CORSE, of Baltimore, had introduced or sent it out—which they might do without originating it, just as Mr. FAHNESTOCK has sent out the



*Augusta* Rose, originated by the Hon. JAMES MATHEWS, of Ohio. We do not believe that there has been the slightest disposition shown in any quarter to obscure the history of this fruit. If Mr. DOWNING or ourselves have not given full credit to Mr. E. W. CARPENTER, of Lancaster, Pa., for aiding in its introduction and dissemination, it was only because the facts of his agency in the matter had not then come to our knowledge. We think, therefore, that Mr. FAHNESTOCK'S anxiety in this matter is entirely uncalled for.

MAGNIFICENT GREENHOUSE PLANTS.—Early in February we made a hurried call at the houses of ERASTUS CORNING, JR., Esq., of Albany, and found some of the most superbly grown plants we remember to have seen in this country. Miniature trees, in full bloom, of four or five species of *Acacia*, besides *Camellias*, *Polygalas*, *Abutilons*, *Laurustinus*, &c., &c. *Spiraea Reevesi*, or *lanceolata*, was finely in bloom. This hardy shrub bears forcing admirably, and proves no less useful in the house than on the lawn. In the stove a fine plant of *Bletia Tankervillei* had thrown up several very strong flower-stalks, and a few flowers had already expanded. Every plant in these houses appeared to be in the finest possible condition, and show on the part of the gardener, Mr. MAURICE WALSH, both careful and skillful management. It is rarely one meets with such plants. Many of them are the result of not less than ten years, and it may be twice that, of careful training. We believe the finest specimens were purchased a few years ago from Mr. MENAND, who we think gives more attention to the growth of fine specimens of hard-wood house-plants than any other professional florist we know of.

FRAUD IN FRUIT TREES—CORRECTION.—In an article in our last number, copied from the *Rural New Yorker*, the following occurs: "With regard to these agents, I give it merely as my opinion, and would like to be corrected if wrong, that the Rochester nursery-men have no agents abroad for whose transactions they hold themselves responsible." We believe all the Rochester nurseries have agents doing business for them, and for whose transactions they are responsible; but they are doubtless furnished with such evidences of authority as will distinguish them from imposters. A correspondent has very properly called our attention to this matter.

ERRATUM.—In the review of Mr. MEEHAN'S book, in our February number, our correspondent is made to commit an error which would not have been the case if a line had not been omitted. He is speaking of two trees, and but one is mentioned. After the word "themselves," line 24, page 22, should have been added, "Again of the *Franklinia*, now *Gordonia pubescens*;" we have succeeded, &c. Without the above, our correspondent's proposed quotation to add to the criticised book reads very like nonsense.

DEFERRED.—Our friends have so abundantly supplied us with articles, the past month, that we find we have a dozen pages in type that must be deferred, besides many other articles marked for publication. Correspondents who look in vain for their contributions in the present number, will therefore accept this as our apology.

FRUIT CULTURE IN VIRGINIA.—JOHN T. BRONAUGH, Esq., of Warrenton, Virginia, writes us as follows:

"More trees have been put out here this fall than during the previous twenty years. There is a perfect mania here for fruit. I raised peaches this year in my orchard weighing from 8 to 10 ounces. My success has waked the people up to the subject."

**STEALING FRUIT.**—It will be seen by the following circular, which the committee requested us to publish, and which we noticed in our last number, that an attempt is being made by our friends in Pennsylvania, to have a law passed declaring the stealing of growing fruit, vegetables, &c., larceny. We hardly think the Legislature of Pennsylvania can refuse a law so evidently just—a law not only needed for the protection of the cultivators of fruit, but also needed to prevent the formation of pilfering habits in youth. We hope the agitation of this matter will tend to cure the thoughtless picking of fruit, so annoying to cultivators. How often has every horticulturist had cause to regret the thoughtless picking of a rare fruit by his friends—perhaps the only specimen, and one which he had been long and eagerly watching. His friends were welcome to any fruit in his garden, save this. But it is gone, and he has to wait another long year.

"*Gentlemen*—At the last meeting of the Allegheny County Agricultural Society, the undersigned were appointed a committee to correspond with you and others, and ask your coöperation to procure at the coming session of the Legislature an act declaring the *stealing* of growing fruit, vegetables, grain, &c., *larceny*.

"Believing the common law distinction between *stealing* from the ground or wagon and *taking* from the tree or vine, absurd, and productive both of injury to the agriculturist and evil to society, our farmers and fruit growers urged on the Legislature, at its last session, to pass such a law for this county, but were met by the objection that it would not do to have a criminal law for one county different from that of the rest of the State.

"Deeming such a law essentially necessary to protect the farmers and fruit growers of Pennsylvania, who have so much wealth and industry embarked in their vocations; and deeming the present trespass remedy entirely inadequate and useless; we respectfully and earnestly ask your cordial coöperation, by the votes of your members at Harrisburgh, and by petitions, if you think it advisable, to secure the passage of a simple law declaring the wrongful taking of fruit, vegetables, grain, &c., whether attached to the soil or not, *larceny*, and to be punished as such.

"Then may we hope to keep pace with the horticulturists of our sister States, who are encouraged and protected by wholesome laws.

ROBT. MCKNIGHT, J. S. NEGLEY, JNO. YOUNG, JR., *Committee.*"

In your last volume, you gave us "Notes of a Conversation over a Dish of Pears on New Year's Day." I have looked eagerly, with each succeeding number, for its continuation; for *such* information I consider of more value to the fruit grower, either the amateur or for the market, than a dozen years' subscription to your journal: and a continuation, covering your experience with winter Pears, and the best method of ripening them, with whatever is peculiar to each or any one of them, requiring different treatment from the general mode, would be a most valuable and acceptable service. And in their behalf, as well as my own, I invite its continuation, varied with this addition: that you note uniformly such as are finer and larger on the quince than on their own stocks, or the reverse; for I am satisfied this is a point which has not yet received that attention it deserves, and that no greater service could be rendered to the fruit-growing community than its settlement.

It is true that our Pomological Conventions are engaged in this; but their action embraces distant sections of the country, within each of which there may be localities for which their recommendations are entirely unfitted. I will illustrate: With me, the *Easter Beurré* and *Passe Colmar*, on Quince stocks, are small and indifferent fruits. I have never had a well-ripened specimen; and this is not occasioned by the want of either suitable age or proper cultivation, for they have fruited the past five years, and been uniformly highly cultivated; while the fruit has been preserved, both in cellar and upper rooms, exposed to as well as excluded from the atmosphere, with nearly uniform results, and in no wise satisfactory. Those from their own stock, mean-

while, have ripened uniformly well; and by deferring the *time* of gathering *as late as possible*, and boxing or barreling close, placing them in a cool and dry cellar until wanted for ripening, and then removing them to a warm room, they have been truly delicious and desirable fruits. With you, I suppose, it is the reverse of this; in Boston also, and how many other localities I do not know, but enough to make it *the* stock recommended for them.

Now, a more accurate knowledge of the effect of locality—for to no other cause can I attribute my want of success—would have saved me the years I so patiently and so uselessly awarded to the fruiting of these trees, as it will undoubtedly hundreds of others now undergoing the same probation with these, or other fruits. And as a corrective to this great evil, I suggest that *every subscriber you have* furnishes the results of his experience with all the sorts he may have fruited on both the stocks, embracing quality and vigor of growth. In this manner a mass of invaluable information would be obtained, because entirely reliable. Let me exemplify: Your recommendation from Rochester of the Quince stock for the *Easter Beurré*, or *Passe Colmar*, and no one yet can say how many others, would, to the *Monroe county* men, be full of value and instruction, while to me it would be worse than useless—a false guide, leading to years of “hope deferred only to end in disappointment.” The reason is, the localities are too far apart. The space must be contracted—or, in other words, a more *general* information diffused, so that each may find, in the “chronicles of his own county,” the experience which no other can so truly teach. I do not mean to say there are no exceptions to this rule; they are numerous, of fruits valuable in all localities: still they are exceptions, and so long as these remain, will this “exact knowledge” be desired. If you think so, will you set the “ball in motion?” P.—*Waterville, N. Y.*

The *Easter Beurre* here answers the highest expectations on the Quince, but proves indifferent on the Pear. *Passe Colmar* succeeds on both, but is usually larger and finer on the Quince. Experience from different localities is exceedingly desirable, and we are doing all in our power to collect it. Until recently not much has been done with winter Pears, and we can not expect for a few years any great amount of information based on actual experience.

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DESSERT PEARS.—The following are now in season, (last week of February):

*St. Germain*, old—With me this variety has been very much better than I have had it before. My specimens are of a beautiful yellow color, without the slightest blotch or speck of any kind; and they have ripened off to perfect mellowness in the cellar, though I find it improves the flavor to be in a temperature of 60°, or thereabouts, for ten days before being brought on the table.

*Belle Cennaise*, or *Eliza de Heyst*,—A fair, handsome, pale-colored, roundish Pear, of the family of Bergamots, just now in season; but specimens have been ripening occasionally all winter. This is a melting, good Pear, somewhat gritty at the core. The tree grows well, and bears profusely; and, therefore, I think this variety will soon appear in the catalogues, and become better known. It is a Belgium Pear, of not very recent introduction. Last year I had specimens of *Bergamot Sugeret*, which I thought identical with this variety.

*Josephine de Moline*—My specimens of this variety were last season finer than ever before, and I think more than favorably of it. Only a few early gathered ones are yet fit for use, but these are melting, juicy and delicious. It is a tip-top keeper, being now as fair and firm as in November; and I have no doubt will remain so till April, at least. This, also, is a very productive sort; and if it prove so good as I now believe it will, the orchardists must turn their attention to it.

*Easter Beurré*—This, I maintain, is the prince of winter Pears, a as late keeper; as the *Beurré d'Arenberg* is, for early winter up to New Year's day. It is of the largest size; ripens perfectly in my cellar, either in boxes or on shelves; keeps till April; and is as buttery, juicy and delicious as a Pear can be. I have had early gathered ones in use all winter and late gathered



ones are yet as sound as ever, and just beginning to color. On the Quince this Pear is all that can be desired, and I can not do wrong in advising orchardists to plant it on the largest scale. Ten acres, containing 1,000 trees, would, at eight or ten years after planting, be sure to yield a net income of \$2,000 or \$3,000. The tree is a great bearer, and, though a moderate grower when young, acquires vigor with age.

*Doyenné d'Heur d'Alençon*.—This is another long keeper, not generally so large as the *Easter Beurré*, but fair and handsome, and ripens off to complete excellence in the spring. The tree is of very robust growth, and productive.

Farther notes hereafter. GENESEE.

THE CONCORD GRAPE.—I saw in the February number of the *Horticulturist* an advertisement of the *Concord* Grape, where its merits are set forth in very glowing terms. I hope it will prove equal to what is claimed for it. Mr. HOVEY says it is four weeks earlier than the *Isabella*. I think this is doubtful. You will find, on file in the *American* office, that Mr. LOVERCRAFT put ripe *Isabella* Grapes in the show-case in the Arcade on the sixth day of September last. Mr. BOOTH also says that he had *Isabella* Grapes ripe the first week in September last, in proof of which he refers to his memorandum book of that time. When I pruned Mr. EENEZER WATTS' vines this winter, he told me that he had packed thirty boxes of his *Isabella* Grapes about the twentieth of September last. He is not at home just now, or I would have more accurate information. It would be doing an injustice to the *Isabella* to allow the impression to go abroad that it does not get ripe till a month after the third of September—the time Mr. HOVEY says the *Concord* Grape was ripe last season. JAS. LENNON.—Rochester.

It is not at all uncommon for the *Isabella* to ripen here, in favored exposures, early in September. But there must be a wide difference between Concord and Rochester, in regard to the ripening of fruits; for Mr. BULL says that he has cultivated the *Isabella* fifteen years, without ripening it, and that the *Concord* ripens on the 10th of September.

GRAPES.—According to my experience, the most productive way of growing the American Grape is to let it climb into a tree.\* In April, 1839, I planted out some *Isabellas*, from cuttings of the previous spring, on the south side of a close board fence, and allowed them to run *wild*, for an experiment, into some Peach trees on the other or north side of the fence. From that period to the present they have never been touched by a knife, for I liked to see them riot in their native luxuriance. They annually bear in immense profusion; so enormously, indeed, that it must be witnessed to be credited. They have, however, nearly destroyed their supporters, which, of course, I could not prune on account of the Grapes; but the latter hide the long, naked branches of the Peaches consequent upon the desuetude of the pruning-knife. C. E.—Sandwich, C. W.

### Kitchen Garden.

A KIND friend and correspondent, who forgets neither the cultivation nor the *literature* of the garden, sends us the following. Many thanks to him for such a seasonable contribution!

THE POET COWPER ON HOT BEDS.—In this go-ahead world of ours, who reads that poet of nature, COWPER? He is, I fear, voted a little old fashioned, which he never can be to the calm and contemplative lover of the country. To such as do not know it, I may say that he has given as good a description of how to make a hot bed, as any writer on gardening ever did or

\* But not the way to get the finest fruit.—Ed.

ever can do. As it is seasonable, perhaps its appearance in the *Horticulturist* may be acceptable, and here it is:

"Warily, therefore, and with prudent heed,  
He seeks a favor'd spot; that where he builds  
The agglomerated pile his frame may front  
The sun's meridian disk, and at the back  
Enjoy close shelter, wall, or reeds, or hedge  
Impervious to the wind. First he bids spread  
Dry fern or litter'd hay, that may imbibe  
The ascending damps; then leisurely impose,  
And lightly shaking it with agile hand  
From the full fork, the saturated straw.  
What longest binds the closest forms secure,  
The shapely side, that as it rises takes,  
By just degrees, an overhanging breadth,  
Sheltering the base with its projected eaves:  
The uplifted frame, compact at every joint,  
And overlaid with clear translucent glass,  
He settles next upon the sloping mound,  
Whose sharp declivity shoots off secure  
From the dash'd pane the deluge as it falls.  
He shuts it close, and the first labor ends.  
Thrice must the voluble and restless Earth  
Spin round upon her axle, ere the warmth,

Slow gathering in the midst, through the square mass  
Diffused, attain the surface: when, behold!  
A pestilent and most corrosive steam,  
Like a gross fog Bætian, rising fast,  
And fast condensing on the dewy sash,  
Asks egress; which obtained, the overcharg'd  
And drench'd conservatory breathes abroad,  
In volumes breathing slow, the vapor dank;  
And, purified, rejoices to have lost  
Its foul inhabitant. But to assuage  
The impatient fervor, which at first conceives  
Within its reeking bosom, threatening death  
To his young hopes, requires discreet delay.  
Experience, slow preceptress, teaching oft  
The way to glory by miscarriage foul,  
Must prompt him, and admonish how to catch  
The auspicious moment, when the temper'd heat,  
Friendly to vital motion, may afford  
Soft fomentation, and invite the seed.  
The seed selected wisely, plump, and smooth," &c.

—*Cowper's Task — The Garden.*

Indeed, Mr. Editor, we have left the good old books our fathers read, for trash, utter trash; for books from which we neither learn to live or die, rationally. Let me quote another passage, descriptive of the retired country gentleman, much to my taste:

"How various his employments whom the world  
Calls idle; and who justly in return  
Esteems that busy world an idler too!  
*Friends, books, a garden, and perhaps his pen,*  
Delightful industry enjoy'd at home,

And nature in her cultivated trim  
Dress'd to his taste, inviting him abroad—  
Can he want occupation who has these?  
Will he be idle who has much to enjoy?"—*Ibid.*

GIANT ASPARAGUS.—In a late number of the *Horticulturist*, we told all our friends who read that publication (and we regret the want of taste in those who do not) how we took some miserable, starved, sickly, dying, roots of the Pie-plant, and by a little nursing until they got some better, and a liberal supply of good wholesome food, made them the wonder and admiration of all who saw their product. How much healthful comfort this little painstaking has given us we can not justly say, but we know that it has been a great deal at a very cheap cost; and every body else can have it, if they please, just as cheap as we do.

There is another plant, seen to be sure in almost every garden spot in the land—sometimes presenting only one or two straggling stalks, as if it were introduced only for variety—and again in small plots, so diminutive in size that its identity is almost lost in its dwarfishness: and yet it is so agreeable to the taste, that every body admires it; and so healthful withal, that every body should be provided with it, and which is equally susceptible of improvement, and in more ways than one amply compensates for all outlays in its cultivation. This is Asparagus, an article once supposed by many to be valueless, unless its flexible stalk was employed to ornament the mirror, or hang up in the *best room*, to attract the flies in their summer visitation.

We have experimented with this plant for our personal gratification. The success was all we could desire; and if any one will be benefitted by the result, we are happy to give it to him. In the outstart, we spaded the ground, well manured, deeply and thoroughly. The roots—puny, half-starved things—were then set sufficiently deep to protect them from drouth and upheaval by severe frost, and salt enough to whiten the ground thrown over the bed. The salt in due time—

and it did not take long, when the spring dews and rains were acting upon it—dissolved, and its strength went down to feed the roots of the Asparagus. It did not feed any grass and weeds; if the quantity valuable for Asparagus is given, it is death to them. So we had a very clean patch—the Asparagus, as we wished, monopolizing the whole of it. An improved growth will be the result the first season; and in autumn a good coating of manure should be given, for the protection of the plants through the winter, and forked in in spring. Salt or brine from the beef or pork barrel should be again liberally supplied. By following this course, an Asparagus bed may be improved, besides furnishing a goodly supply for cutting through many years; and, for aught we know, be kept in good condition a lifetime. In spring, after the bed is prepared by forking and salting, if it is covered with a thin layer of straw, the young shoots will be protected from the earth which often collects upon them in heavy rains; and the earth will be benefited by being kept moist and open, so that the shoots will spring up more readily.

It is one of the beauties of Asparagus to have it tender. In order to secure this, it must have a quick growth and be often cut. We have found, from our experience, that the former result attends our course of culture, and have no doubt but it will be realized by others who adopt the same plan. At any rate, it can, without much labor or expense, be tried by any one, on a small scale, and the issue will reveal itself. W. BACON.—*Richmond.*

THE JAPAN PEA.—As this vegetable is beginning to attract some attention among horticulturists, it may not be amiss to make a few observations on its qualities as an article of food and profit. Season before last, Mr. LEA, of the Cincinnati Horticultural Society, presented the members with one or two heads of this prolific Bean, or Pea, as it is called. From fourteen seeds I raised nearly a quart of dry Beans when hulled. That was in a rich border of leaf mold. But they were planted too close together—only three inches apart. Some had more than 200 pods on them, with two or three seeds in each. This year I tried them in rather poor soil, where Osage Orange plants grew the previous year, which, according to my experience, impoverishes the soil very much. I planted eight rows thirty yards long, the rows two feet apart, and the Beans six inches apart in the rows. They produced about half a bushel of dry seed, which would be about sixteen bushels to the acre. In good ground, I have no doubt they could be made to yield twenty bushels. So much for profit.

With respect to its qualities for the table, there is not much to say in its favor. When green, it is so difficult to divest it of the hull that it will be unpopular with cooks. When dry, they are easily cleaned or shelled with a flail. They require at least five hours boiling to make them tender enough to eat, but I do not believe any amount of boiling would cause them to burst. It will be necessary to cook some other Bean with them, as they are entirely destitute of flavor.

They grow from two to three feet high, with stiff, branching stems, and look beautiful in the garden. They stood last season's drouth remarkably well, not dropping a single leaf until frost.

If any of your readers would like to try them, I shall be most happy to enclose them a few in a letter, if they will address me post-paid. T. V. PETIGOLAS.—*Mount Carmel, Clermont Co., Ohio.*

LIMA BEANS.—Observing, for several years, that those hills of Lima Beans which were shaded by the others produced fewer and inferior crops than the vines exposed on the outer rows, I have adopted, with advantage, the plan of planting in borders, wherever I could put them without casting the shade on other crops. New hands pick their Lima Beans, for winter use, in a young, unripened state; nothing could be more erroneous. Let them get nearly dry on their own vines, and soak them for use two nights before boiling, putting the water on them hot. It is a good plan to sprout the Beans under a pane or two of glass before planting them round the poles.\*

\*It is a very good plan with most other kinds of Beans, as well as Peas, and many other sorts of garden seeds.—Ed.



NOTES ON GARDEN VEGETABLES.—I imported the year before last some Lettuce and Cos seeds from Paris, and have been so much pleased with some of the kinds that I think them worth knowing. I tried both the Green Cos and the Grey Cos (*Romaines vertes* and *grise*), and found both so good that I cannot decide between them. They both headed remarkably well, and were very large, tender and sweet. Among the Cabbage Lettuces, the Genoese (*Laitue de Gènes*) produced also a very large, fine and tender head, equal to any Cabbage Lettuce I have ever known. The Maltese (*Laitue de Malte*) headed very finely; is curled, full sized, and so tender that it can hardly be handled. It combines the crispness and sweetness of the Cos with the tenderness of the Cabbage Lettuce varieties, and, on that account, I prefer it to any other that I am acquainted with. I tried about twelve varieties in all, but the above were far the best. I have been well supplied with fine heads of the above since the last week in November; I mean to save seeds abundantly, and can send you, when gathered, such of them as you may desire. Lettuces, to do well, must have plenty of fresh manure, some salt, and plenty of rain or other water, besides good culture. ROBT CHISOLM.—*Near Beaufort, S. C.*

### Answers to Correspondents.

(DAVID C. SCOFIELD, Norwich, N. Y.) TRANSPORTATION OF TREES.—Your suggestions are excellent, and if space permitted we should insert your letter entire. The evils of delay are becoming intolerable. A movement is on foot here to effect some arrangement that will at least lessen the difficulties. We shall give notice of it in our next number. We have a mass of letters before us, on this subject, showing that there exists no little solicitude in regard to it. We trust that railroad directors will hereafter class living trees and plants among "perishable articles," and forward them with the same promptness and dispatch.

(E. P. G.) DRAINING APPLICABLE TO LEVEL GROUND.—We presume you mean draining ground on which there is not a natural fall or outlet for the water. In some cases of this kind on our own ground we have sunk large reservoirs and filled them up with stones, and have carried the drains into these. A very slight inclination will lead off ordinary drainage; and drains sunk pretty deep, and made close, will have a good effect even where the water can not run. In such cases we prefer stones to tile.

(P., Waterville, N. Y.) PEARS.—You will find some notes from a correspondent, whose statements you can rely upon as correct in this locality.

You invite your readers to ask questions; therefore allow me to inquire whether budding trees can be successfully practiced in spring? If so, what is the process—the whole? (1)

What is the best time to cut scions for grafting, and the best way to preserve them till spring? If kept in dirt, should I bury the whole, or what part? How wet must the dirt be? (2)

In setting out a young Pear orchard, would you prefer the pyramidal form or horizontal mode of training to the trellis? By the latter mode would not the large fruit be safer from winds? (3)

I have a number of thrifty Cherry trees, of different kinds, which have made fruitless efforts to bear for several years. Some are in sandy soil, others in heavy but not wet land. The fruit falls prematurely, and but few specimens come to perfection. The Pear does well on the same ground. What does the Cherry want more than, or different from, the Pear? A neighbor succeeds admirably with the Cherry, but can do nothing with the Pear. (4)

I have asked the preceding questions in a plain, farmer-like way. They undoubtedly seem very simple to you: so the solution of a simple problem in the Rule of Three would be to me; but to require a boy to do it who has not crossed the bridge of Addition, would be imposing a difficult task. I am just commencing fruit growing a little. The trees I have are self-educated, and have worked their way to treeshood with but little aid; therefore I infer that the soil, climate, and exposure, are pretty fair; and reading the *Horticulturist* has made me willing to lend them a hand. I have set some hundreds of Peach trees upon a hill of considerable altitude, with a northern and western exposure. The north wind has a clean sweep upon them for sixty miles. I set them there because there are fewer frosts, and I think less intensity of cold in winter, than on the plain below. I have Peach trees standing on an inclined plane—the upper ones about twenty-five feet higher than the lower. Summer before last the upper ones were full of fruit;

the lower ones failed to bear. Last fall I set a self-reg. string thermometer among the lower trees, and another among the upper ones; and for several still nights they reported five degrees difference. I changed them, and they reported the same difference.

Warm air ascends, cold sinks; but there is a point beyond which warm air does not rise, and on becoming cold, is ready to fall. Now I think the fruit grower who locates upon an altitude where this turning point is found, is a fortunate man; he may have frosts above and below him, and repose in safety between the two. I shall make further experiments through the winter, at different elevations.

By the way, these young trees were all stung by something, last summer, and a deposit made in the heart for from one to two feet from the top down, at different places. I do not know the imp that did it. His work resembles that of the locust, which was not here. I shall cut off the tops of about three hundred, and burn the contemplated progeny—Hummel's plan is the only one by which these insect visitors are held at a respectful distance. W. B. WATSON.—*Johnston, N. Y.*

(1) Spring budding is seldom practiced, being much less certain than either grafting or the common summer budding. The scions are cut as for grafting, and buried deeply in dry earth, to retard them until vegetation is so far advanced that the bark of the stock rises freely, when the buds are inserted as in the usual way. The buds must of course be taken off with a portion of the wood attached. A kind of budding which the English call "scallop budding" can be performed at the season of grafting, before growth commences. A bud is taken off the scion in the usual way, and a corresponding piece of bark and wood is taken off the stock. The bud is then fitted on the stock so that the bark at the top and at least one side will be placed in even, close contact, and is tied in the ordinary way. This mode is considerably practiced by the French Rose growers. In both cases the stock must be headed back to within two or three inches of the bud as soon as a partial union has been formed, in order to direct the growth into the newly inserted bud.

(2) We prefer the early part of winter for cutting scions, but it can be done with safety any time before the buds begin to swell. They keep very well in a cold, dry cellar, with the lower ends in earth or entirely buried. Where a cellar is not suitable, or when scions are wanted for late spring grafting, we prefer to bury them in a pit three or four feet deep, among dry, sandy earth. A mound of earth should be thrown up over the pit, to shed the water.

(3) We should prefer pyramids or low, half standards, as the espalier training requires too much labor to be advisable in orchard culture. On low standard trees, planted rather close, the heavy fruits are nearly as safe as they would be on trellises.

(4) We can not account for such a case. It is possibly some defect in the soil; we can not say what. The Cherry prefers a dry, light soil; and in our own practice we have not known it to fail in such. The crop will be surer as the trees grow older. The Cherry is by no means difficult to suit in soil, provided always it be *dry*.

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A FRUIT GARDEN.—In compliance with your request I will give you particulars. My garden is on the corner: 50 feet front, south of the house, facing west; and 100 feet on the street, fronting south. I wish to set it to fruit trees, (the dwarf or pyramidal form), and get a good variety of fruit for a small family; also cultivate some of the smaller sorts of vegetables, and perhaps two Grape vines and some Strawberries. L. M. MARSH.

We would advise you to make a walk five or six feet wide around the garden, six feet from the fences; thus leaving a border six feet wide all around, for small fruits and vegetables. Grape vines and Apricots can be trained on the fences. Then there should be a cross walk in the center, and the two center plots thus cut off can be filled with dwarf and pyramidal trees planted in rows. In this way you will make the most of your ground, and have as sightly an arrangement as is possible under the circumstances. You will find a plan in the *Fruit Garden*, pages 183 and 184, that may be of some assistance to you.

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Is the Pear on the Quince as well or better adapted to cold climates as on free stocks? The thermometer indicated  $-25^{\circ}$  last winter. B. F. MILES.—*Barrington, Wis.*

The Pear succeeds well on the Quince as far north as lat.  $44^{\circ}$ , and it may be farther. We think it will succeed on the Quince wherever it does on the Pear, but we can not say that it exercises much influence on the hardiness of the tree.

By stating a few facts connected with the culture of my green-house plants, I may enable you to tell me the cause and prescribe a remedy for the want of luxuriance in them. My house plants were all repotted, last September and October, into pots and tubs likely to suit each individual species. The compost used was black mold, composed of decayed tree leaves and loam taken fresh from the woods, and afterwards mixed with decomposed manure, charcoal, sand, &c., as was thought necessary for the different kinds of plants. The place from which the fresh earth was taken is a good deal of the nature of iron, and I think must contain oxyd of iron. The process of potting was judiciously managed as regards drainage, &c. Spring water is used, which is carried to the house by lead pipes. The spring rises out of the heart of an iron ore bed. The tank is within the house, and holds about 150 gallons. It is tempered by the atmosphere of the house. The temperature at night is never allowed to rise above 50° or sink below 45°. Day temperature also moderate.

The hard, coarse texture of the plants, the dropping off of Camellia blossoms, leaves of Orange trees, Begonias, &c., compels me to seek from you a remedy. My gardener says that the absorbent nature of the brick flues, and the escape of sulphuric acid gas, cause the premature dropping of the leaves and flowers. Can this be? No gas can escape, for we never have any smoke. We had some at first, but we have got over that evil. Again, he says the coarse, rusty appearance of the plants, is owing to the use of spring water, or hard water, as he calls it, and fresh compost, which he says ought never to be used but when thoroughly decomposed and mixed with other vegetable matter. If this doctrine be true, we have a good deal more to think about than the mere getting up a glass building and filling it with plants. C. H. M.—*Delaware Co.*

The falling of the leaves and flower buds is probably owing more to the dryness of the atmosphere than to any other cause. It is not uncommon for plants to lose their foliage to some extent after being repotted. If your flue does not permit the escape of smoke, there can be no injury from gas. The spring water is not so good as rain water would be; but if it remains exposed in tanks in the house for some time before being used, it can not do any material injury. The material of your compost is good enough. The watering of plants has much to do with their health and vigor. If they are allowed to become very dry, or not watered so liberally as to reach the bottom of the pots, or if they are watered too much, they can not thrive. It requires much judgment and experience to water a miscellaneous collection of plants well, and more particularly during the season when fire heat is applied to them.

As the editor of the *Horticulturist* is presumed to be "posted up" in all matters relating to fruit culture, I take the liberty to inquire if you can give me and your readers in general, any information concerning the culture of the Blackberry, the most desirable varieties, &c., &c. Some of the nurserymen near Boston advertise for sale what they call the "Improved High Bush;" and I understand that in the vicinity of New York a kind is cultivated, called *New Rochelle*. Can you speak from knowledge of the merits of either or both of these kinds? Are they for sale at the nursery of ELLWANGER & BARRY, or any where else in your neighborhood? and at what price? AN OLD SUBSCRIBER.—*Adrian, Mich.*

We can not speak of either of these Blackberries from much experience, but we believe them to be valuable fruits, well worthy of cultivation. They are not for sale here yet, to our knowledge, though they are under cultivation. The "Improved high Blackberry" can be had, no doubt, at any of the Boston nurseries, and the *Lawton* or *New Rochelle* variety has been offered by MESSRS. GEO. SEYMOUR & Co., of Norwalk, Conn., and Mr. LAWTON, of New Rochelle. Both varieties are yet scarce and high priced; we can not exactly state how high.

The cultivation is simple. They succeed well in a dry, rich soil, and are easily propagated by cuttings of the roots.

Will you have the kindness to publish a list of varieties of Apples for feeding stock, suitable for our latitude, for an orchard of five hundred trees? What do you think of the following proportions: One-sixth early, one-third fall, and one-half winter? HENRY J. CHASE.—*Robin's Nest, Ill.*

Will some experienced Illinois cultivator suggest a good list? Sweet Apples are generally preferred for stock; and the *Jersey Sweet*, *Spice Sweet*, *Golden Sweet*, *Lyman's Pumpkin Sweet*, and *Tidman's*, can be recommended, we think, safely. All are very vigorous growing and very productive trees, suitable for orchards.

LAST July my young trees began to be affected with a mold or mildew of a whitish color, that was very injurious; many of the young shoots thus affected, died. I would like to know the cause, and a remedy. WARREN EMERICK.—*Crooked Lake, Wis.*

You should say what sort of trees, and what part of them was affected.



As there are different theories in regard to the cause of the blight in Pear trees, I suppose my facts in regard to it will be acceptable to you. In a communication, last summer, I gave an account of a dwarf tree being attacked with that disease soon after a severe frost. The weather has been quite severe with us the present month, my thermometer on the 2d of January marking —29 at five o'clock, and —15 at sunrise. I find one of my Pear trees with the top entirely destroyed, and the limbs presenting the same appearance as in case of blight, the bark having turned black, &c., while the buds are still fresh. On the tree, last spring, the disease first appeared in spots on different parts of the tree, but in the present case the limbs present the same appearance to within two or three inches of the trunk of the tree. I send you herewith a piece of a limb for examination. The tree was set out last spring, and although it grew but little through the season, it was apparently sound and healthy in the fall. When the disease appears in the winter, is it advisable to cut away the diseased parts at that time, or delay until early spring? A. O. BAUCKER.—*East Troy, Wis.*

The shoot accompanying this note is jet black, and has exactly the same appearance as shoots affected with the so-called "fire blight." We have seen unripe shoots killed by severe weather in the winter, and turn black like this; but this shoot must have been well matured, (second year's growth,) as fruit-buds or spurs already appear on it, in a considerably advanced state. We are more inclined to attribute the death of this shoot to the "blight" than to winter killing.

Will you please answer, through your invaluable journal, the following queries? They may be of service to others. Will the Bourbon Roses withstand our winters as far north as Rochester, without protection? (1) Will the Tree Peony (*P. moutan Banksii* and *B. rosea odorata*) withstand our winters without protection? (2) Will the Flowering Currants (*Ribes Gordonii* and *R. sanguineum*) withstand our winters without protection? (3) When is the best time to transplant Raspberries? (4) GEO. H. HODGES.—*Collins Center, N. Y.*

(1) Not well; they require slight protection.

(2) They do stand with us, in sheltered places, without protection; but we would advise slight protection. The growth will be more luxuriant, and the bloom better.

(3) The *Gordonii* is perfectly hardy, but the *sanguineum* is not; and although we never protect, we believe it necessary in exposed places.

(4) In Western New York we prefer spring—as early as the season will admit. We succeed very well in transplanting in the latter part of September or first of October; they get well rooted again before winter sets in.

We will comply with your other requests as soon as practicable.

PERMIT me to make a suggestion that you or some of your correspondents name and describe a few of the finest varieties of Gooseberries. There is no doubt but it is a fruit entitled to more consideration than it receives. I was very successful, last summer, in raising a crop of fine Gooseberries, free from mildew.

I wish you to advise me what would be the best twelve varieties of Pears with which to increase my collection, after having planted the following:—*White Doyenne, Gray Doyenne, Bartlett, Chandelup, Beurre Fick, Beurre d'Amatis, Osageo Beurre, Duchess d'Angoulême, Napoleon, Belle Lucrative, Louise Bonne de Jersey, Flemish Beauty, Doyenne Boussock, Madeleine, Glout Morceau*. I wish to plant dwarfs. JAS. BOLTON.—*Babineville.*

TWELVE GOOD VARIETIES OF LARGE GOOSEBERRIES—FREE GROWERS AND GOOD BEARERS.—Red—*Crown Bob, Warrington, Lancashire Lad, Roaring Lion, Echo, Companion*. White—*White Smith, Shaba Queen*. Yellow—*Golden Drop, Banker Hill*. Green—*Green Ocean, Green Willow*. There may be many others in the long lists of varieties in cultivation as good as these.

TWELVE VARIETIES OF PEARS.—*Bloodgood, Dearborn's Scrolling, Rostiezer, Tyson, Stevens' Genesee, Beurre d'Anjou, Urbaniste, Vicar of Winkfield, Beurre d'Arenberg, Easter Beurre, Columbia, Lawrence*.

I WOULD feel obliged if you or some one of your numerous subscribers would furnish me with the particulars of the *Victoria regia, Victoria Fitzroyiana*, and a few more aquatics—the size and depth of tank, the mode of heating the same, and how often the water requires changing. I would at the same time wish to know how high I must make my house. Could I grow a few Palms and air plants in the same house? If so, a list and description of a few suitable for the same, and where I can procure them, price, &c. A LOVER OF FLOWERS.—*Alton, Ill.*

## Notices of Books, Pamphlets, &amp;c.

TRANSACTIONS OF THE NORTHWESTERN FRUIT GROWERS' ASSOCIATION. Third Annual Meeting, held at Chicago, Oct. 4th to 7th, 1893.

THIS enterprising association is prosecuting its duties with true western energy and success. We have perused their late proceedings with great pleasure, not merely for the information we have been able to gather from them, but because they indicate a great degree of intelligence, and especially a spirit of inquiry and communicativeness among cultivators that cannot fail to be of great benefit to the Western States, and aid materially in advancing pomological science in general.

Already we see enough of the fruit-growing capacity of that wonderfully fertile region to warrant the belief that fruit culture is there to become a most important pursuit. Such apples as have been sent us by the Messrs. AVERY, of Burlington, and others, we have never yet seen equalled for size and beauty. The climate, to be sure, has its difficulties; but then courageous men of the west know exactly how to meet and conquer difficulties. They have been well schooled in this matter. We intended to run through the discussions, and note the more important points, but we find we can not at this time.

In addition to the regular business proceedings of the Convention, we find an address, delivered on the first evening, by J. A. WRIGHT, Esq., editor of the *Prairie Farmer*, and an excellent address it is—truthful, harmonious and poetic. Mr. WRIGHT is no less at home in recounting the pleasure and profits of horticulture than he is in discussing the topics of prairie farming. A letter was read from Prof. KIRTLAND, of Ohio, on the Pear, which we shall give in our next number.

A resolution was passed, calling on each member to furnish "a list of such fruits as have been tested in his neighborhood, and have proved positively good." This was a very good way to get at some practical results, and we give below these lists by twenty-one members:

"APPLES for general cultivation, by L. MONTAGUE, having tested the same some twelve years: *Summer Fruit*—Red Astracan, Prince's Early Harvest, Benning Stripe, Early Golden Sweet, Sweet Bough. *Fall Fruit*—Alexander, Shaker Apple, Shaker Red Streak, Fall Pippin, Rambo, Mother Apple, White Bellflower. *Fall and Winter Fruit*—Scollop Gilliflower. *Winter Fruit*—Westfield Seeknofurther, Baldwin, Esopus Spitzenburg, Vandervere Pippin, Oldtown Pippin, Putnam Russet, Golden Russet, Rawles' Janet, Milan, Belmont, Royal Pippin, Talman's Sweet.

"By B. HATHAWAY, Little Prairie Ronde, Mich.: *Summer*—Canada Sweet, Early Harvest, Summer Rose, Early Strawberry, Sweet Bough, Tart Bough, Golden Sweet, Carolina June, S. Rambo. *Fall*—Fall Pippin, Maiden's Blush, Wine Apple (of the West). *Winter*—Rambo, American Golden Russet, Spitzenburg, Baldwin, Black Apple, Rox Russet, Westfield Seeknofurther, Rhode Island Greening, Swaar, Gates, and Jonathan.

"Fruits for general and extensive cultivation in St. Joseph county, Ind., by WM. H. LOOMIS, South Bend, Ind.: APPLES.—*Summer*—Red Astracan, Large Sweet Bough, Early Harvest, Golden Sweeting, Summer Rose, Summer Queen, Carolina Red June. *Fall*—St. Lawrence, Fall Pippin, Maiden's Blush, Jersey Sweet, Fall Red. *Winter*—Baldwin, Bellflower, yellow, Bellflower, white, Famuese, Jonathan, Ladies' Sweet, Lady Apple (for a long-keeping, dessert fruit), Northern Spy, Yellow Newtown Pippin, Pomme Grise, Rawles' Janet (never fail), Rambo, Rhode Island Greening, Roxbury Russet, Swaar, Spitzenburg Esopus, Talman's Sweet, Vandervere. PEARS.—Dearborn's Seedling, Stevens' Genesee, Madeleine, Rauss' lit Stuttgart, Bloodgood, Bartlett, Belle Lenerative, Napoleon, Duchess d'Angouleme, Flemish Beauty, Louise Bonne d'Jersey, Seckel, White Doyenne, Tyson, Vicar of Winkfield, Beurre Diel, Passe Colmar, Buffum, Doyenne

GRIS. PEACHES.—Early York, Early Tillotson, Coles' Early Red, Crawford's Early, Oldmixon's Free Stone, Royal Kensington, Crawford's Late, George Fourth, Gros Mignonne, Large White Cling, Lamon Cling, Red Cheek Melocoton. CHERRIES.—Black Tartarian, Black Eagle, Early Purple Gaigne, Yellow Spanish, Napoleon Bigarreau, Belle d'Choisy, May Duke. PLUMS.—Earl's Golden Drop, Prince's Imperial Gage, Washington, Green Gage, Bradshaw. GRAPES.—Isabelle, Catawba, Herbemont. CURRANTS.—White Dutch, White Grape, Cherry. GOOSEBERRIES.—Houghton's Seedling.

By SMILEY SHEPHERD, Hennepin, Ill.: APPLES.—Early Harvest, Carolina Red June, Summer Pearmain (English), Gravenstein, Fall Wine, Rambo, Pennsylvania Red Strack, or Pennsylvania and New Jersey Seekno further, Bellflower yellow, Pearmain, Herefordshire, Pryor's Red, Baldwin, Rawles' Janet.

APPLES.—By LEWIS ELLSWORTH & Co.: Sweet Bough, Early Harvest, American Summer Pearmain (top grafted), Keswick Codlin, Fall Pippin, Spice Sweet, Pound Sweet, Calvert, Talman Sweet, R. I. Greening, Pomme Grise, Rawles' Janet, Vandervere.

APPLES.—By C. R. OVERMAN, Canton, Ill.: *Summer*—Spice Sweet, Yellow June, Benoni, Early Harvest, Golden Sweet, Glass Apple (Summer Rose), Hocking, Maiden's Blush, Summer Pearmain, Sweet June, Sine Qua Non, Trenton Early, Carolina June. *Fall*—Fulton Strawberry, Lindley's Nonpareil, Autumnal Swaar, Downing's Paragon, Fannese, or Snow Apple, Fall Pippin, Gravenstein, Green Sweeting, White Seekno further, Wine Apple, Gabriel, Rambo. *Winter*—Dominie, English Golden Pippin, Golden Russet (B. Pippin), Limber Twig, Ladies' Sweeting, Mountain Pippin (fall), Roman Stem, Roxbury Russet, Vandervere, Wagoner, White Bellflower, White Pippin, Winesap, Willow Twig, Yellow Bellflower, Winter Swaar, W. Winter Pearmain, Baldwin, Newtown Pippin, Rawles' Janet, Fulton.

“Mr. O. says: ‘I am aware there are too many kinds in this select list; yet would not be without any one of them.’

APPLES.—By B. B. Drake, Elk Grove, Cook co., Ill., more or less tested, and deemed excellent: Esopus Spitzenburg, R. I. Greening, American Summer Pearmain, Winesap, Rawles' Janet, Aromatic Pippin, ripens in September. Keswick Codling, for cooking, from July 15 to October. A Sweeting, supposed to be Golden Sweeting. Another Sweeting, which was had for Golden Sweeting; Sept. to Dec., or Jan.; very rich, sweet and juicy. Barnhill's Summer, Yellow Bellflower.

APPLES.—By T. McWHORTER—Have proved valuable in his locality: Red June (Blush June), Summer Rose, Sweet June, Early Harvest, Summer Queen, Spice Sweet, Summer Pearmain, Gravenstein, Maiden's Blush, Fall Wine, Franklin Golden Pippin, Cooper, Fall Pippin, Rambo Snow, Vandervere, White Bellflower, Yellow Bellflower, American Golden Russet, White Winter Pearmain, Talman Sweet, Wine Sap, Janet.

APPLES.—By O. B. GALUSHA, Lisbon, Kendall co., Ill.: Carolina Red June, Early Harvest, Summer Queen, Jersey Sweet, Maiden's Blush, Fall Wine, Rambo, Fall Pippin, Fannese, Dominie, Yellow Bellflower, White Winter Pearmain, Vandervere, Vandervere Pippin, Belmont, Winesap, Rawles' Janet, Roman Stem, Golden Russet.

APPLES.—By B. TRUESDELL, Elgin, Kane co., Ill., ripening in succession, only such as have been thoroughly tested: Early Harvest, Red June, Sweet June, Sweet Bough, Summer Queen, Cooper's Early, Keswick Codlin, Porter, Late Strawberry, Winesap, Fall Pippin, Snow, Rambo, Belmont, Brewster, Talman Sweet, Black Gilliflower, Swaar, Pomme Grise, Smith, Rhode Island Greening, Rawles' Janet.

By SAMUEL EDWARDS, La Moille, Bureau co., Ill.: APPLES.—Carolina Red June, Sweet June, Early Harvest, Early Pennock, Summer Rose, Hocking, Maiden's Blush, and Keswick Codlin, for culinary purposes, Monarch, Yellow Ingestrie, Snow, Rambo, Dominie, White Winter Pearmain, Yellow Bellflower, White Bellflower, Rhode Island Greening, Winesap, Willow Twig, Rawles' Janet, Limber Twig and Red Romanite, are very productive and profitable. PEARS.—



Bloodgood, Bartlett, Flenish Beauty. PLUMS.—Lombard, Prince's Imperial, Gage, Duane's Purple. CHERRIES.—May Duke, Early Richmond. STRAWBERRIES.—Necked Pine. GRAPES.—Isabella. RHUBARB.—Scotch Hybrid, Victoria.

"APPLES—By M. L. DUNLAP, Leydon, Cook co., Ill.: Early Harvest, Summer Rose, Sweet Bough, Spice Sweet, Keswick Collin (for cooking), Peach, Holland Pippin (for cooking), Cooper, Red Gilliflower, Winesap, Lyman's Pumpkin Sweet, Yellow Bellflower, Rhode Island Greening, English Russet.

"Mr. D. says: 'These are recommended for good growth, hardiness, bearing, and good qualities of fruit.'

"APPLES—By J. M. HUMPHREY & Co., Viola, Delaware co., Iowa: Sour Bough, Red Astracan (for cooking), Sweet Bough, Keswick Codlin, Famuese, Rambo, Fall Pippin, Colvert, Ribston Pippin, Yellow Bellflower, Esopus Spitzenburg, Vandervere, English Golden Russet, Milam, Pennock, Willow Twig.

"Mr. H. says: 'I would remark that I have not seen many of these varieties in bearing in Delaware county, but am well acquainted with them in the vicinity of Davenport.'

"APPLES—Cultivated at Davenport, Iowa, by H. FINLEY: Sour Bough (dessert), Red Astracan (cooking), Sweet Bough (do.), Keswick Codlin (do.), Famuese (dessert), Rambo, Fall Pippin, Colvert, Ribston Pippin, Monarch, Yellow Bellflower, Baldwin, Rhode Island Greening, Esopus Spitzenburg, Pomme Grise, Gum Sweeting, Vandervere, Swaar, Herefordshire Pearmain, Hubbardston Nonsuch, Talman Sweeting, English Golden Russet, Summer Queen.

"APPLES—By ISAAC NEGUS, Muscatine, Iowa: Early Harvest, Sweet June, or Summer Sweeting, Red June, Early Bough, Summer Queen, Summer Pearmain, Summer Pennock, Fall Wine, Fall Pippin, Maiden's Blush, White Rambo, Rambo, Roman Stem, Golden Russet, or Bullock's Pippin, Yellow Bellflower, White Bellflower, Winesap, Esopus Spitzenburg, Newtown Spitzenburg, Baldwin, Swaar, White Winter Pearmain, Sweet Romanite, Porter, Spice Sweeting, Ladies' Sweeting, Northern Spy, Rawles' Janet, Newtown Pippin, Holland Pippin, Newark Pippin, Rhode Island Greening.

"APPLES—By ISAAC P. ESSEX, Pine Bluff Nursery, Illinois City, Rock Island co., Ill.; for latitude 41 deg. 20 min.: Yellow Harvest, Red June, Sweet June, Summer Queen, Early Pennock, Fall Beauty, Rambo, American Golden Russet, Milam, Yellow Bellflower, White Winter Pearmain, Putnam Russet, Red Romanite, Esopus Spitzenburg, Limber Twig, Harrison, for cider.

"APPLES—By JOHN BELLANGEE, Bureau co., Ill.: Early Harvest, Early Strawberry, Early Pennock, English Red Streak, Cooper's Early White, Summer Queen, Drap D'Or, Fall Winesap, Monarch, Snow, Fall Pippin, Rambo, Vandervere, Yellow Bellflower, White Bellflower, Fallwater, Dominie, Cook's Green, Romanite, Willow Twig, Golden Russet, Roxbury Russet, Sweet Romanite.

"REJECTED.—Pennock, or Large Romanite, Ashmore, or Hoops, Prince's Everlasting, Barnhill's Summer.

"APPLES—By O. P. JENNISON, Crawfordsville, Ind.: Carolina Red June, Sweet June, Early Harvest, Sweet Bough, Kirkbridge White, Summer Queen, Hop Apple, Daniel Apple, Wine Apple (fall), Rambo, Early Strawberry, Drap D'Or, Fall Pippin, Summer Pearmain, Maiden's Blush, Monstrous Pippin, Alexander, Gravstein, Connet's Sweet, Rhode Island Greening, President, Talman's Sweet, Milam, Bullock's Pippin, Esopus Spitzenburg, Newtown Spitzenburg, Hubbardston Nonsuch, Baldwin, Northern Spy, Michael Henry Pippin, Boston Russet, Newtown Pippin, Yellow Bellflower, White Bellflower, Chandler, Transport, Peck's Pleasant, Detroit Red, Broadwell, Swaar, Jonathan, Blue Pearmain, Winesap, Westfield Seekno further, Red and Green Sweeting, Roman Stein, Osceola, Pennock, Canfield, Vandervere Pippin, Vandervere, Fall Queen.

"APPLES—By EZRA STETSON, Galesburg, Mich.: American Summer Pearmain, Large Sweet Bough (best Early Sweet Apple—see Berry Fruit Garden), Carolina Red June, Early Harvest,

Golden Sweeting, Primrose, Fall Strawberry, Autumn Swaar, Fall Pippin, Jersey Sweeting, Malibu's Black, Black Detroit, Rambo, Baldwin, Yellow Bellflower, Hubbardston Nonsuch, Jonathan, Newtown Pippin, Herefordshire Pearmain, Rhode Island Greening, Roxbury Russet, Sweet, Talmage's Sweeting, Esopus Spitzenburg, Edmont, or Waxen, commonly called Gates. *Kilby Apple*, from Litchfield, Ct., is a very valuable mid winter Apple. *Three Best Summer*—Early Harvest, Sweet Bough, Primrose. *Three Best Fall*—Autumn Swaar, Rambo, Fall Pippin. *See Fall Winter*—Hubbardston Nonsuch, Belmont, Newtown Pippin, Rhode Island Greening, Roxbury Russet, Baldwin.

"Mr. S. says: 'These Apples are all raised in my immediate vicinity, or by myself, and prove valuable in Michigan.'

"*APPLES*.—By E. HARKNESS & SONS—(Fruit Farm, Peoria, Ill.): *Summer*—Early Harvest, Carolina Red June, Sweet June, Hocking, Summer Queen, Jersey Sweet. *Fall and Winter*—Baldy Sweet, French Pippin, Rambo, Maiden's Blush, Autumn Swaar, Fall Wine, Jersey Black, Westfield Seeknothfarther, Fameuse, Red Calville, White Winter Pearmain, Michael Henry Pippin, Tabern Sweet, Baldwin, English Golden Russet, Esopus Spitzenburg, Fulton, Winesap, Rawles' Janet, Red Romanite, Limber Twig, Newtown Pippin.

"*APPLES*.—By WM. STEWART, SR., Quincy, Ill.; for latitude of 40 deg.: Carolina June, Summer Pearmain, Roman Stem. Yellow Harvest, Summer Rose, Summer Pearmain, Rambo, Yellow Bellflower, Rawles' Janet, Dancer, Carolina June, Jersey Sweeting, Roman Stem, Peck's Pleasant, Buckingham, Winesap, Newtown Pippin, Winter Sweet. Golden Sweeting, Maryland Codlin, Maiden's Blush, Red Gilliflower, White Bellflower, English Red Streak, Esopus Spitzenburg, Brown's Sweeting, Rhode Island Greening, Westfield Seeknothfarther, Baldwin, Roxbury Russett, Pryor's Red, Fall Pippin, Summer House.

"Mr. S. says: 'The number of each variety to be varied according to the use designed for the orchard; the above selection being for family use.'"

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ADDRESS OF FRANCIS P. BLAIR, Esq., to the Agricultural Association of Montgomery county, Md. Delivered at the late Fair at Rockville.

We have to thank a friend for a copy of this able Address. We are glad to see rural affairs assume an aspect of new life and vigor in the South. The State and County Fairs of 1853 in Maryland have been very successful, and must have done much to arouse the cultivators of that State, and spur them on to improvement. The following passage in Mr. BLAIR's Address should be read and re-read by those who are in the habit of looking with contempt on country life:

"Men who have made fortunes in our cities begin now to appreciate the value of country life, however averse or unsuited to it they may have been rendered by habit. The common guide-book of Paris, which is put into every traveler's hand, has this note under the head of population: 'Families constantly residing in Paris soon become extinct. The effects of this mortality are observed to be more active upon males than females.' What is true of Paris is true of every city in the world. There is not probably a man in London, Paris, New York, or Philadelphia, who can say that his great-grandfather, his grandfather, and his father, successively, lived and died in the city of his residence. There is no such thing as a survivor of three generations that have undergone the decomposing power of a city atmosphere, assisted by city pursuits. A city, then, may be said to die out once in a hundred and fifty years, so far as regards those rooted generations that live, and move, and have their being only within a city's precincts. Whoever, then, would have succession in his family—that desires to transmit his name and wealth by perpetuating his race—should at some period of his life take his leave of walls and pavements and crowded thoroughfares, and fix his abode in the midst of rustling foliage, green fields, clear streams, and sweet air, untainted by stagnation in the walled streets, and alleys, and sewers.

"There is another observation in regard to cities which induces thoughtful men, who take pride in their posterity, to remove from them when they have accomplished the objects for which they were sought. How many millions of children educated in cities with the utmost care have passed away without reaching distinction among their countrymen! It is remarkable that children born and bred in cities generally exhibit precocious talents; they have the easiest access to every species of learning; they are stimulated to exertion in the schools by the number of competitors, and by that parental pride, vigilance, and solicitude which is spirited up by the stirring society around; they have the advantage of imbibing an early knowledge of the world, and have almost in infancy the manners, the ideas, and self-possession of polished society. But although the great cities of the Old World and of the New World send forth probably one hundred of these fully-educated youths to test their strength in the high pursuits of life, for one country adventurer, yet it is found that almost all the distinguished men who shine in the service of the country, or in the liberal professions, are country-born and bred. The hot-beds of cities bring forward their plants more rapidly; but those springing from the native soil, and braving the rude seasons and rough culture of the country, are found to have the best stamina. Look over the list of great men who figured in our revolution, and it will be found that almost to a man they were country-born and bred. Search the annals of the revolution in England from the reign of the first CHARLES to the third WILLIAM. These were times that tried the souls of men in the mother country. Scarce a name appears that does not owe its celebrity to faculties grown in the country."

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TWENTY-THIRD ANNUAL REPORT OF THE NEW HAVEN COUNTY HORTICULTURAL SOCIETY FOR 1853, with an Address by Rev. W. CLIFT.

This pamphlet shows us that the New Haven Society had nearly four hundred tax-paying members in 1853; that from the 7th of May to the 17th of September, it held weekly exhibitions, with liberal contributions at each, and an Annual Fair in September. We have perused the transactions with much interest, and find many things worthy of note. The Directors may well congratulate the Society on its continued prosperity.

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REPORTS OF COMMITTEES FOR 1853, OF THE MASSACHUSETTS HORT. SOCIETY, with the Schedule of Prizes for 1854.

This great Society, the pride of the whole country, prosecutes its labors with undiminished success, and sends us reports full of instruction. The prizes offered for 1854 amount to \$2,520, divided thus: Prospective prizes, \$750; for gardens, greenhouses, &c., \$200; for fruits, \$620; for plants, flowers, and designs, \$700; for vegetables, \$250. This, with the honorable ambition to excel, are sufficient to call out great efforts, and produce great results.

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JOURNAL OF THE UNITED STATES AGRICULTURAL SOCIETY.

We have received numbers 3 and 4 of this journal, from WM. S. KING, editor of the *Journal of Agriculture*. Mr. KING is the Secretary of the Society and the editor of the Quarterly. It contains a full and complete report of the First National Exhibition of Horses at Springfield, besides a large amount of other interesting matter. The book contains 280 pages.

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CATALOGUES RECEIVED.—*Select List of Florists' Flowers, consisting of Roses, Dahlias, Verbenas, Fuchsias, Geraniums, Salvias, Chrysanthemums, &c., cultivated and sold by P. R. Freecoff, Auburn, N. Y.* This new establishment is in the market with a very good and well arranged list of articles.

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*Wholesale Catalogue of Flower Seeds, from J. M. Thorburn & Co., Seed Warehouse, 15 John street, New York.*



### Horticultural Societies.

**BROOKLYN HORTICULTURAL SOCIETY.**—While some Societies, organized for the promotion of Horticulture, are struggling with public apathy, others are springing into existence under propitious circumstances, with an energy and enthusiasm which should ensure success. Brooklyn, the city of Churches, is just the location for a flourishing Society, to refine still more the already civilized elements of society in that pleasant city. Such a Society has been organized.

We attended one of its meetings at the Athenæum on Thursday, February 16th, which, though an adjourned business meeting, was well attended by amateurs, gardeners, florists, and others. A selection of choice Camellias, Cinerarias and cut flowers, of green-house plants, was displayed on the table.

MR. H. A. GRAFF had several new varieties of the Camellia imported lately, among others the Duchesse des Cases, Margaret Guillon, Jussieu, Bassa Chevalier Lafontaine, Santiniana speciosa.

MR. JAS. WEBB, Yellow Bayridge, L. I., had a basket of choice cut flowers, one of which was a seedling raised by him. It is somewhat in the style of imbricata (Dunlaps), but sufficiently distinct, and worthy of further notice. He had also blooms of Princess Bacchocchi, a very small flower compared with some specimens of that desirable Camellia that we have grown. With this single exception, the flowers were large and finely formed.

MR. POINTER exhibited two seedling Cinerarias—one he has named the Pride of Brooklyn, and the other Rienzi. They are both good varieties. He had cut flowers of various green-house plants.

The President, J. W. DEGRAUW, called the meeting to order. The Recording Secretary, MILTON ARROWSMITH, Esq., read the minutes of the last meeting. The Committee on Plants and Flowers submitted a schedule of premiums to be awarded at the first semi-annual exhibition, to be held the 10th, 12th and 13th days of May next. It was moved that the report be adopted, and 1,000 copies of the schedule be printed. Passed.

A list of honorary and corresponding members was proposed. MR. DUNHAM, the Treasurer, moved that R. R. SCOTT, of the *Horticulturist*, be added to the list. MR. SCOTT declined the honor, and suggested that they should substitute P. BARRY, the editor of that magazine. It was then proposed that P. BARRY, of Rochester, editor of the *Horticulturist*, be added to the list of honorary members. Passed unanimously.

Among the honorary members, are Messrs. Beecher, Bethune, Vandyck, Vinton, Longfellow, Kennedy, Pisc, Dwight, Speer, Van Anden, Arnold, Spooner, Heighway and Miley. Forty resident members were added to the list of the Society. Adjourned to the 23d inst.

The following are the officers for the ensuing year:

JOHN W. DEGRAUW, *President*. HENRY C. MURPHY, JOHN MAXWELL, HENRY A. KENT, STEPHEN KNOWLTON, and SMITH J. EASTMAN, *Vice Presidents*. WILLIAM S. DUNHAM, *Treasurer*. DELOS W. BEABLE, *Corresponding Secretary*. MILTON ARROWSMITH, *Scriven Bank*, corner of Wall and Water sts., *Recording Secretary*.

**PENNSYLVANIA HORTICULTURAL SOCIETY.**—The Stated Meeting was held as usual this evening, (January 17). The President in the Chair. The following awards were made:

**PLANTS AND FLOWERS.**—*Collection of twelve Plants*—For the best, to Robert Buist; for the second best, to Thos. Meehan, gardener to C. Cope. *Specimen Plant*—For the best, to Robt Buist; for the second best, to Thos. Meehan. *Table Designs*—For the best, to Thos. Meehan. *Basket of Cut Flowers*—For the best and for the second best, to Thomas Meehan.

**FRUIT.**—A special premium of \$1 was awarded to Isaac B. Baxter, for fine specimens of Passe Colmar Pears.

**VEGETABLES.**—For the best display by an amateur, to Thos. Meghran, gardener to W. H. Stewart, Torresdale. Special premiums of \$1 each, for a dish of Mushrooms, and a dish of Cucumbers (Godfrey's Surprise), to Thomas Meghran; and for Imperial Sion-house Cucumber, to Wm. Thompson, gardener to John Tucker.

**AD INTERIM FRUIT REPORT.**—JANUARY 17, 1854.—The Fruit Committee respectfully report that they have received, since the December *ad interim* report, specimens of the following varieties:

From CHAS. B. ORR, Pleasant Valley, Bucks county, Pa.,—the *Water Apple*.—Represented to be a very productive variety. Size—medium; two and a half inches long by two and five-eighths broad. Form—oblong, inclining to conical. Color—red on the greater part of the surface, interspersed with one or more white spaces, and a number of

green blotches; greenish-yellow about the crown and on the unexposed portion. Stem—half an inch long and one-twelfth thick, inserted into a rather narrow, deep, acuminate cavity. Calyx—medium, closed, set in a moderately wide, plaited, sometimes shallow, occasionally deep, basin. Seed—medium, brown, ovate. Flesh—greenish-white, fine texture, remarkably tender, juicy. Flavor—sprightly, with an agreeable aroma. Quality—"very good."

From PERSIFOR P. FRAZER, of Philadelphia, through J. J. VANDERKEMP—seed of the Salmon Berry, from Bodega, California; and dried Raspberries, from Sitka, in Russian America, near the fifty-seventh degree of north latitude.—More than a year ago we learned, from a reliable quarter, that a Raspberry of very large size and fine flavor had been found growing in California. Repeated attempts were made by us to obtain the variety, without, however, succeeding in accomplishing our object. We were, therefore, highly gratified at the unexpected receipt, through Mr. VANDERKEMP, not only of the seed of the California Raspberry, but also the dried berries of a variety from the island of Sitka, high up on the Pacific coast, and upward of nine hundred miles northwest of the mouth of the Columbia river. In an interesting letter to one of the committee, Mr. FRAZER gives us the following information in regard to them:—"The dried Raspberries in the package marked 'Sitka,' were brought from the Russian colony of that name, on the northwest coast of America, by my friend JAMES C. WARD, of San Francisco. He procured them while on a visit there, this last summer, and sent them to me with the hope that the plants might possibly be raised from them. I know nothing of them except that they are the Raspberry of the place. The seeds in the other package are those of a large, buff-colored Raspberry, known in the country as the Salmon Berry. I found it growing, apparently wild, among nettles, at Bodega, a small seaport about fifty miles northwest of San Francisco. Bodega is the port of a tract of country which was (for a length of time previous to the taking possession of the country by the United States) in the occupation of the Russians, who leased it for the purpose of supplying their colonies with grain. The Raspberries were found on the shore of the harbor, under the projection of high cliffs, which sheltered them from the northwest winds. As they were in the immediate vicinity of the company's warehouses, it is very possible that they had been planted there by the Russians, though I could not perceive any traces of cultivation. They grow, if I recollect aright, on the talus of the cliffs, and so completely mixed in with high nettles that I found it very difficult to procure them. The plants were from five to six feet in height, and the berries of at least twice the volume of the *Antwerp*, and between a buff and a salmon color, with a very delicate flavor, which reminded me of that of our *Carnation* Cherries. An attempt was made by Gen. PERSIFOR F. SMITH to send the cuttings home, but they died on the passage across the isthmus of Panama. On speaking on the subject to Mrs. Dr. RHEA BARTON, she gave me directions for having the seed prepared. These directions were forwarded to my friend Mr. WARD, and a few days since I received the packages which Mr. VANDERKEMP placed in your hands." \* \* \* \* The berries from Sitka, though thoroughly dried, were quite large; we counted the seeds in two of them, and found sixty-eight in one and seventy-two in the other.

A circular, addressed to the Society by a Committee of the Allegheny County Agricultural Society, was read, desiring the coöperation of the Society in procuring the passage of an act by the Legislature declaring the *stealing* of growing fruit, vegetables, grain, &c., *larceny*.

On motion, the subject was referred to a select committee of three, with power to act.

The President announced that he had received from Commodore PERRY, of the Japan Expedition, a small package of seeds, and a letter, which was read, purporting that the seeds were a present to the Society, and requesting that a portion of the products of each kind might be preserved, and if new and interesting, the credit be given to the Expedition.

On motion, ordered that the thanks of the Society be tendered to Commodore PERRY for the gift, and the seeds be referred to the Committee for the Distribution of Seeds, &c.

ANNUAL MEETING.—The Annual Meeting of the Society was held on Tuesday, January 17, 1854, and the following gentlemen were elected officers for the ensuing year:

GEN. ROBERT PATTERSON, *President*. JAMES DUNDAS, W. D. BRINCKLE, M. D., RICHARD PRICE, ROBT CORNELIUS, *Vice Presidents*. JOHN THOMAS, *Treasurer*. THOMAS C. PERCIVAL, *Corresponding Sec'y*. THOS. P. JAMES, *Recording Sec'y*. SAM'L S. HALDEMAN, A. M., *Professor of Entomology*. WM. DARLINGTON M. D., *Professor of Botany*. ROBT HARE, M. D., *Professor of Horticultural Chemistry*.

GENESEE VALLEY HORTICULTURAL SOCIETY.—The Annual Meeting of the Horticultural Society of the Valley of the Genesee was held at the Court House, Rochester, on the 4th of February.

P. BARRY, Chairman of the Fruit Committee, being called upon for a report, stated that—

A box of fruits, containing upwards of ninety varieties of Pears, twenty-seven of Apples and three of Quinces, was received from M. ANDRE LE ROY, of Angers, France, by ELLWANGER & BARRY, on the 9th of November. The greater portion of the fruits were in an advanced state of decay, and therefore not in a fit condition for public display; but the Secretary was requested to notify the Fruit Committee and such other members of the Society as he knew most interested in pomology, of the arrival of the fruits, and where they might be seen. The fruits had been carefully packed, and having met with no unusual delay on the journey, would doubtless have arrived here in good condition but for the unfortunate mistake of sending among them a few early autumn sorts that must have decayed immediately after being packed. The collection was a very fine one; the specimens that remained sound were large and handsome, but not one retained its natural flavor.



of the varieties of Pears grown and tested here, were fine specimens of Bozy Satspared, Beurre d'Arenberg, Unifloré St. Germain, Beurre Chaguan, Easter Beurre, Catillac, Gheut Moreau, Beurre Dind, Van Mons Leon le clerc, Vieux et Winkfield, Beurre gris d'hyver, St. Germain, Suzette de Bayay, Soldat Laborer, Triomphe de Jussieu, Winter Nettes, Colmar des Invalides, Princes St. Germain, Doyenne d'Alençon, Doyenne Goubaux, Grand Siret, Beurre d'Arenberg, Doyenne Sieble, and Doyenne Dillen.

Of the Apples, so far as such as are not known here to any extent, there were fine specimens of Grand Mogul; St. Jean Baptiste—a very beautiful fruit, with a red cheek—apparently a good keeper; Cadet de Vaux; Bergamot d'Espéran; Des Chassards; Gros Colmar; Beurre Botwellier—a handsome fruit, and apparently a good keeper; Bozy tardif; M. de la Fosse; L'abbé; Frai, red d'hyver; Tonnent; Tarquin; Jalouse tardive; Royal d'hyver; Angeleque de Bordeaux; Frontignan; Taverne de Boulogne—a handsome, peculiarly formed Pear, and a good keeper.

Of the Apples remaining sound there were good specimens of the following:—Reinette d'Espagne—a very large and beautiful fruit, resembling our Fall Pippin. White Calville. Red Calville. Alfriston—a large, conical, ribbed, irregular fruit; pale yellow, with a network of white; resembling the Gloria Mundi. Pigeonnet de Rouen—a conical, striped Apple, like a Gullflower. Rousseau Brisset—has much the appearance of Roxbury Russet. Pomme de femme—a handsome Apple, like a Maiden's Blush. Domänen—a beautiful, waxy lemon-yellow Apple; flat; resembling a ripe Yellow Harvest. Rosa—a roundish, irregular shaped Apple; greenish-yellow, striped; similar in color and somewhat in shape to the Minister. Fenouillet gross—a roundish, russet Apple, resembling the Bourassa; rough skin. Reinette Parmentier—a roundish-oblong Apple; smooth; pale russet.

The Committee recommend that a Diploma and the thanks of the Society be presented to M. Le Roy, for his valuable collection of fruits.

On motion, it was unanimously

*Resolved*, That the thanks of this Society, with a Diploma, be presented to M. Le Roy, for the fine collection of fruit he so kindly sent us.

MR. H. N. LANGWORTHY called the attention of members of the Society to the *Michael Henry Pippin* Apple, brought by him from Indiana.

The following gentlemen were elected officers for the ensuing year:

H. P. NORTON, of Brockport, *President*. JOSEPH WILLIAMS, of Rochester; SELAH MATHEWS, of Brighton; ROBERT BROWN, of Greece; H. HOOKER, of Irondequoit; ZERA BUEB, of Perinton; SAMUEL SHADBOLT, of Scottsville; *Vice Presidents*. H. E. HOOKER, of Brighton, *Corresponding Secretary*. JAS. VICK, JR., of Rochester, *Recording Secretary*. JAMES H. WATTS, of Rochester, *Treasurer*.

*Committees*.—P. Barry, J. J. Thomas, H. E. Hooker, John Donellan, J. W. Seward, E. S. Hayward, L. A. Ward, J. W. Bassell, H. N. Langworthy, L. B. Langworthy, Geo. Ellwanger, Alonzo Frost, *Committee on Fruits*. Joseph Frost, Wm. Webster, J. Satter, J. A. Eastman, R. Donellan, J. M. Whitney, C. F. Van Doorn, *Committee on Flowers and Flowering Plants*. H. N. Langworthy, Jas. Vick, Jr., Horace Hooker, James Buchan, *Committee on Vegetables*. Chester Dewey, Francis Trentman, Moses Long, G. H. Smith, P. Cooney, *Committee on Botany*. J. Vick, Jr., J. A. Eastman, J. P. Fogg, *Committee on Finance*. H. P. Norton, P. Barry, Jos. Frost, H. N. Langworthy, J. Vick, Jr., Chester Dewey, *Executive Committee*.

**BUFFALO HORTICULTURAL SOCIETY.**—The Annual Meeting of this Society was quite spirited, evincing a desire, on the part of its members, to re-establish its former prosperity and usefulness. The following list comprises the officers elected for the ensuing year:

AMASA MASON, *President*. COL. J. E. SMITH and MYRON STILWELL, *Vice Presidents*. HIRAM C. WHITE, *Treasurer*. JOSEPH B. EATON, *Corresponding Secretary*. CHARLES E. CLARKE, *Recording Secretary*.

*Committees*.—L. F. Allen, Benj. Hodge, Lewis Eaton, *Committee on Fruits*. JOS. R. SMITH, Jno. Westphal, A. J. Mathews, *Committee on Flowers*. J. Sexton, J. Senek, W. Grainger, *Committee on Vegetables*. W. R. Coppock, W. Lovering, Jr., J. D. G. Stevenson, *Committee on Entomology*.

The Society voted to hold meetings on the first and third Tuesdays of each month; also to have two exhibitions during the present year. The first of the semi-monthly meetings was held at the residence of the President, AMASA MASON, and very largely attended, though in advance of the regular time. It was resolved to raise a fund of two thousand dollars, or upwards, for the purpose of forming a permanent investment, the interest of which should be applied towards the expenses of a Central Hall, at which the meetings and exhibitions of the Society may in future be held. A committee for that purpose was formed, consisting of Col. HODGE, CHARLES E. CLARKE, Esq., and LEWIS EATON, Esq.; and the President of the Society guaranteed to raise a second thousand dollars as soon as the first thousand should be subscribed.

The Society has a very fine library and many excellent members, with an abundance of material and horticultural taste, to insure one of the best Societies in the State. Buffalo has many wealthy citizens, who take pride in ornamenting their grounds with choice trees and shrubs, as well as cultivating the finer varieties of fruits.



**NEW YORK HORTICULTURAL SOCIETY.**—This Society made arrangements, at the close of last year, to hold informal or conversational meetings for the discussion of topics connected with Horticulture. A set of rules for the proper conducting of the meetings, were adopted; and, with a view to preserve a full report of the proceedings for the use of the Society, R. R. SCOTT was requested to act as Secretary to the meetings. Reports have been published, in a condensed form, in the *American Agriculturist*; but, as the topics are of more interest to the Horticultural readers, I will furnish a report, at your suggestion, commencing with the first conversation, should you decide upon devoting space to it.

*First Conversational Meeting, December 13th.*—Mr. J. C. PARSONS in the Chair. Subjects for Discussion—"The Cultivation of Fruits," and the "Pot Culture of the Rose."

P. B. MEAD made some introductory observations on the importance of these conversational meetings, after which he read an Essay on Fruit Culture, and concluded by moving that a committee be appointed to report a list of the best fruits for the vicinity of New York. Passed. A committee of five was appointed.

The subject of the Cultivation of Roses in Pots was taken up and discussed. It was agreed to adjourn the subject till next meeting, when the General Cultivation of the Rose would be taken up.

R. R. SCOTT, *Sec'y to Conversational Meetings.*

**RHODE ISLAND HORTICULTURAL SOCIETY.**—This Society held its annual meeting January 25, 1854. The meeting was much larger than usual, and more interest seems to be manifested in the prosperity of the Society and the advancement of horticulture in the State. The Society was incorporated this month, and held its first meeting under the act of incorporation, when the following officers and committees were unanimously elected:

JOHN J. STIMPSON, *President.* WM. S. PATTEM, *Vice President.* GILBERT CONGDON, *Treasurer.* JOHN F. DRISCOL, *Recording Secretary.* JOHN KINGSBURY, *Corresponding Secretary.* WM. S. PATTEM, WM. M. SNOW, C. B. MANCHESTER, *Executive Committee.* OWEN MASON, STEPHEN H. SMITH, GEO. B. PECK, JOHN J. STIMPSON, ELLIS B. PITCHER, LEWIS DEXTER, JAMES ELDERD, D. H. LEONARD, SILAS E. MOORE, I. H. HOLDEN, *Fruit Committee.* GEO. HUNT, RICHARD DAGLISH, LEVI MEDCALF, WM. NESBIT, WM. H. DYER, GEO. ANDERSON, ALEX. FORSYTH, D. E. CARPENTER, WM. M. SNOW, WM. McLEOD, *Flower Committee.* WM. VIAL, S. B. HALADAY, GEO. L. CLARK, CRAWFORD ALLEN, ABNER GAY, I. N. FRANCIS, P. W. MARTIN, *Vegetable Committee.* JAMES Y. SMITH, ELISHA DYER, JR., *Audit Committee.*

**MASSACHUSETTS HORTICULTURAL SOCIETY.**—The following premiums were awarded by the Committee on Gardens, for 1853:

To BENJ. V. FRENCH, for the most economically managed, best cultivated, and most neatly kept fruit garden, \$25. To JOHN D. BATES, for the most economically managed, best cultivated, and most neatly kept grounds, \$25. To M. H. SIMPSON, for the best managed, most economically conducted, and well kept grapery, \$20. To W. C. STRONG, for the same, \$20. To WINSHIP & CO., for their fruit and other gardens, for neatness, economical management, and good culture, \$25. To HOVEY & CO., for the best managed, most economically conducted, and well kept greenhouse, \$20.

**CAYUGA COUNTY HORTICULTURAL SOCIETY.**—The Annual Meeting of this Society was held yesterday, and the following named persons were elected officers for the current year:

GEORGE E. BARBER, Auburn, *President.* P. R. FREEOFF, Auburn; JOHN MORSE, Aurelius; O. W. WHEELER, Auburn; JOHN R. PAGE, Sennett, *Vice Presidents.* HORACE T. COOK, Auburn, *Corresponding Secretary.* LEWIS PADDOCK, Auburn, *Recording Secretary.* JOHN S. CLARY, Auburn, *Treasurer.* WILLIAM OSBORN, H. T. DICKINSON, L. Q. SHERWOOD, W. D. OSBORN, H. S. DUNNING, A. V. PULSIFER, JAMES L. JENKINS, WILLIAM CUTTING, ORRIN BENEDICT, *Managers.* B. F. HALL, P. R. FREEOFF, GEORGE E. BARBER, O. W. WHEELER, JOHN MORSE, *Committee on Premiums.*

**MAINE BOARD OF AGRICULTURE.**—We are indebted to HENRY LITTLE, Esq., of Bangor, President of the Maine Board of Agriculture, for an account of the proceedings of the Board, which met at Augusta in January, with a list of officers, members, &c. Among the things worthy of note, we observe that Dr. PRESCOTT, of Winthrop, addressed the Board on "*The importance of saving and reproducing the Forests of Maine.*"

A committee was appointed to draft a bill for an act requiring that teachers should pass an examination in the elements of Agricultural science, before being permitted to teach in public schools.

**NEW BEDFORD HORTICULTURAL SOCIETY.**—At the Annual Meeting of this Society, the following officers were chosen for the ensuing year:

HENRY H. CRAPO, *President*; JAMES ARNOLD, WILLIAM P. JENNEY, JONATHAN BOLLES, JR., WILLIAM SWIFT, *Vice Presidents*; EDWARD S. TABER, *Treasurer*; R. C. ANTHONY, *Recording Sec'y*; J. H. W. PAGE, *Corr. Sec'y*.  
*Committee*: Henry H. Crapo, Edward S. Taber, R. C. Anthony, L. B. Keith, James H. Collins, James Manley, E. H. Condit.  
*Committee on Prizes*: Henry H. Crapo, Thomas A. Greene, Joseph Congdon, Rufus Pennington, Jr., Ward Nye, George Tappan.  
*Committee on Programmes*: Joseph C. Delano, George Howland, Thomas D. Hook.  
*Committee on Exhibitions*: Henry H. Crapo, William Swift, John McAfee, John M. Howland, E. N. Swift.  
*Committee on Reports*: Rufus Pennington, Jr., John B. Burgess, Edmund Gardner, Joseph Clark, Philip Anthony.  
*Committee on Vegetables*: Thomas A. Greene, William C. Collin, Wellwood Young, Frederick P. Chase, Isaac D. Hall.  
*Committee on Flowers*: Joseph Congdon, Obed Nye, Hattal Kelley, Lorenzo Davis, Joseph G. Grinnell.  
*Committee on Entomology*: James E. Congdon.  
*Committee on Publications*: Albert D. Hatch.  
*Committee on Enchiridiums*.

**ANNUAL MEETING OF THE NEW YORK STATE AG. SOCIETY.**—The Annual Meeting of this Society was well attended, and an unusual degree of interest manifested in regard to the reports of committees and the arrangements for the future. One of the most prominent topics was the propriety of selecting one or two central and permanent locations for the Annual Fairs. A committee, appointed a year ago to consider this matter, read a carefully prepared report in favor of permanent locations, but the Hon. Mr. BURGESS, of Orleans county, made a very effective argument against the report, and it was laid over for another year.

One thing is very evident to us, viz.: that such a Society as this should have far more complete arrangements at its exhibitions. The winter show at Albany of grain, poultry, fat cattle, dressed carcasses, &c., was held in miserable filthy sheds, no better than we could find around any country tavern. The funds have greatly decreased within two or three years; and, instead of charging this decrease upon the weather or the prevalence of cholera, we are pretty well satisfied that it is mainly due to the notorious discomforts of State Fairs—the universal jam and rush, and the utter impossibility of seeing satisfactorily what people came to see. Only make good arrangements for exhibitions, and provide for the visitors means of easy access to every department of the Show, and have every thing made as plain and instructive as possible, and there will be no lack of visitors, even if the admission were 50 cents, instead of a shilling.

The following officers were elected for the ensuing year, and the next fair is to be held in the city of New York:

WILLIAM KELLY, Rhinebeck, Dutchess Co., *President*; J. C. JACKSON, New York; A. B. CONGER, Rockland; GEO. VAHL, Rensselaer; LE ROY MOWRY, Washington; J. C. WOODRUFF, Oneida; J. BARBER, Cortland; D. H. ABELL, Livingston; S. M. BURGESS, Orleans, *Vice Presidents*; B. P. JOHNSON, Albany, *Corresponding Secretary*; E. CORNING, Jr., Albany, *Recording Secretary*; B. B. KIRTLAND, Rensselaer, *Treasurer*; Edgar C. Dibble, Genesee; Elon Constock, Oneida; Chas. Morrell, Tompkins; T. B. Arden, Putnam; Ambrose Stevens, New York, *Executive Committee*.

The show of Fat Cattle, Poultry, Grain, &c., was much the best the Society has yet made. This winter Show promises to become important. The show of fruit was about equal to previous years. There were several very handsome collections of Apples: N. & E. S. Hayward, Brighton, Monroe county, twenty-one varieties; Isaac Merrit, of Penfield, eleven varieties; R. H. Brown, Greece, twenty varieties; Henry Freeman, Richfield, fourteen varieties; F. Atwater, Ithaca, ten or twelve varieties (all handsome, including fine specimens of the King Apple and Powell Sweet); Hart Massey, Watertown, ten varieties; Isaac Foster, fine Baldwins and Greenings; James H. Watts, a dish of Northern Spy; Jas. Winslow, Watertown, three varieties. Of Pears, there was but one collection, of twenty-eight varieties, from Ellwanger & Barry, Rochester. Some fine Isabella Grapes were shown by John S. Goold, Esq., of Albany.

We must remark that if it be desirable to have a Show of Winter Fruits, it should be made in some place more accessible, as we saw very few in the room, and very many inquiring where the Fruit Show was to be found.

The farmers in the interior are not quite pleased with taking the Fair to New York city. It will no doubt be inconvenient to many; but it is easy of access and affords ample accommodation, besides, the New Yorkers should once see an Agricultural jubilee. It will aid the funds of the Society, we think, and do no harm to the Agricultural interests in general. It should be the greatest Agricultural Show ever witnessed in America.

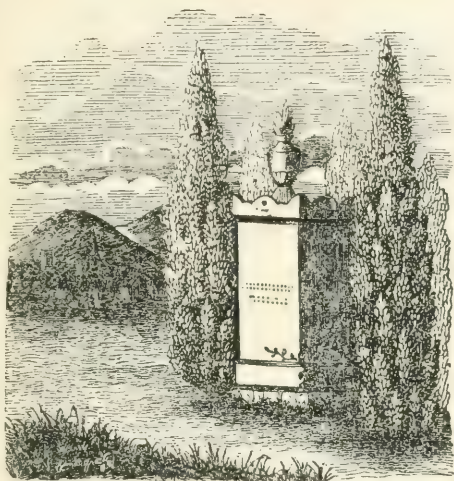


VIRGALIEU PEAR .





## Trees for Rural Cemeteries.



IN the course of our last volume we offered a few suggestions on the laying out and arrangement of cemetery grounds, and promised to follow up the subject with remarks on trees suitable for their embellishment. We have been reminded of this promise by several letters now on our table, and we proceed to redeem it.

First of all, we must observe that there are people who seem to regard trees as not being among the appropriate and indispensable ornaments of the cemetery. They erect massive vaults and monuments of granite or marble, and plant neither tree, shrub,

nor flower near them. This taste, if we may so call it, we can not admire. Trees, it seems to us, are of all others the most appropriate ornaments for the tomb; the shade and shelter which they impart are soothing and agreeable, and there are ideas suggested by their outward forms and moral and historical associations, which address themselves to the reflecting, intelligent mind, quite as forcibly and distinctly as do lettered inscriptions on marble. The literature of all nations has given a language to trees and plants and flowers, and made them symbolize in one way or another nearly every feeling and sentiment of the human heart. Especially is life, death, and immortality, represented by their varied forms and characters, and ever-changing aspects and conditions. As gardening and arboricultural taste increases among us, the literature of trees and plants—the most refining and delightful of studies—will receive more attention, and the work of planting and embellishing grounds will become much more of an intellectual and poetical labor than it now is.

The man who values his trees or plantations merely for their contributions to his physical wants or luxuries, is to be pitied, even in this eminently utilitarian age. For our own part, we love the trees we have planted, as we love our children; and when we gather their fruit, or loiter beneath their branches, we are carried back through the days that have passed since we committed their roots to the earth, and set them out on their journey of life. We think how they and ourselves have jogged along and grown old together, and we almost hear them speak to us with the affection of a brother or a sister. Who can look upon the tree planted by the tomb of a friend, without reading in it the history and recollections of the past, and becoming attached to it as he would to some precious souvenir.

We repeat that there can be no more fitting ornament or memorial placed beside the grave, than suitable trees. And here we call to mind GRACE GREENWOOD'S allusion to the grave of the poet KEATS, in the Protestant burying-ground at Rome. "I was pained, says she, "to find the grave of KEATS in a bare and shadowless place. He, whose heart was so full of music, who loved beauty so passionately, has not a tree to shelter a bird over his lonely rest—not a flower to breathe a perfumed sigh over his lonely pillow." Many a grave is in the same shadowless condition; not from necessity alone, but from neglect and choice.

It is very painful to see the bare and desolate aspect of the quarter set apart for the graves of the poor, in some of our cemeteries. The trifling expenditure of a few dollars in planting a tree here and there over it, would be a wonderful improvement, and would at least show that the authorities considered that these poor, who had no friend behind to raise a monument or plant a tree by their grave, were nevertheless human beings.

In what we have said we do not wish to be understood as raising objections to the practice of erecting monuments to the memory of the dead; far from it. We care not how costly and magnificent they may be, provided they are appropriate to the place and the purpose, and do not convey the idea of a vulgar and heartless exhibition of vanity, as we regret to say they sometimes do. The finest tombstones or monuments strike us as bare and unfinished, without the accompaniment of trees, and especially such trees as in their form and character harmonize with their style. We have a very simple illustration of the effect of trees in the vignette at the head of this article. Take away the tapering trees which support it, and we would have a square block, formal and shadowless, without a line of beauty.

There is something about the memorials which genuine affection places around the grave, so touching and so beautiful as to be readily distinguished from the mere display of wealth, or the cold, formal discharge of a duty imposed by the customs of society. A handful of fresh flowers scattered over a grave—the planting of a bunch of Violets, or a Rose bush—never fails to strike us as a sincere and delicate tribute of affection; while we often, though perhaps uncharitably, question the motives that have raised a splendid monument, and inscribed the fulsome and flattering epitaph.

We have said more on this head than we intended, and must come to the more immediate purpose we set out with.

The selection of trees for the embellishment of a cemetery, calls for the exercise of much taste and discrimination, and should never be undertaken by persons who have but little knowledge of the subject. *Fitness* is every where one of the chief sources of beauty. The burial place has a character and expression peculiarly its own; and whoever undertakes to improve or embellish it, either with objects of nature or art, should be very careful to avoid anything out of harmony with that expression. How we would be shocked to see people visit the house of mourning in the gay costume of the ball-room. So the embellishments of a lawn, pleasure-ground, or flower-garden, would not be a becoming drapery for the tomb. People are very apt to select such trees as they happen to be acquainted with; and therefore we find Elms, Maples, Horse Chestnuts, and other like trees, such as are commonly planted on streets and



lawns, crowded together on small cemetery lots, where they are entirely out of place. We lately saw no less than sixteen Mountain Ash planted in parallel rows on a lot about thirty or forty feet square.

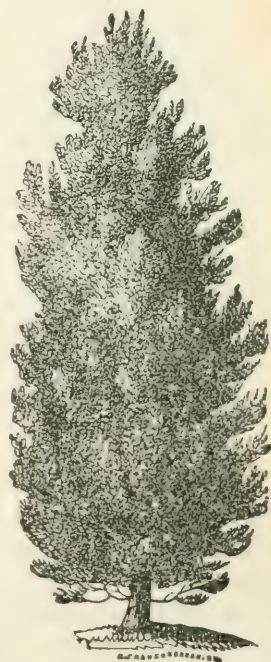
Very grave errors are committed in planting too many trees, as well as in planting unsuitable kinds. People allow themselves to be deceived by the small size of the trees when they plant. Norway Spruce, and other evergreens of the largest size, one or two feet high, planted ten feet distant, look to be far enough apart; but in a very few years they must be thinned out, or they will encroach upon and injure each other. Very few, however, have the forethought or courage to thin; and therefore the trees grow up in a tangled, unsightly mass. We think it must be obvious to any one who will reflect upon the matter, that the narrow limits of a cemetery lot of the usual size is not the place for trees of the largest size. They may be very properly applied to filling up borders and such places as are devoted entirely to plantations. Two or three well chosen trees, properly placed and carefully cultivated, with a good, thick, closely mown carpet of grass, will always give an appropriate and beautiful appearance to a small lot. A few of the more becoming flowers may of course be added—such as a white Rose, a few bunches of sweet Violets, or Daises—the associations of which are in harmony with the place.

Evergreens should enter largely into the ornaments of the grave-yard. In summer they have a quiet and sombre hue; and in winter they impart a certain degree or warmth and cheerfulness, which relieves the gloomy and desolate aspect of nature at that season.

There are cases, however, above all rules. For instance, when a deceased friend may have been a particular admirer of certain trees, shrubs, or flowers, affection might prompt us to plant them by the grave, even if they were not of the most suitable character. Other circumstances may justify similar exceptions, provided always they are not ludicrous, as many conceits are.

The Arbor Vitæ and Junipers furnish some very suitable small sized trees. Our *American Arbor Vitæ* (*Thuja occidentalis*) is a handsome, spiry-topped tree; but the color is too dull, even in summer, and therefore objectionable. It is now, we observe, much used in Greenwood for hedges to inclose lots; and it answers this purpose very well, as it bears any degree of shearing or clipping that may be necessary.

As an ornamental tree, we prefer the Chinese species, (*Biota orientalis*), being more compact in growth, and of a much better color in summer, although it turns rather brown at the north in winter. The branches when young have a spreading habit, but as it grows older they become erect. It forms a tree fifteen to



CHINESE ARBOR VITÆ.

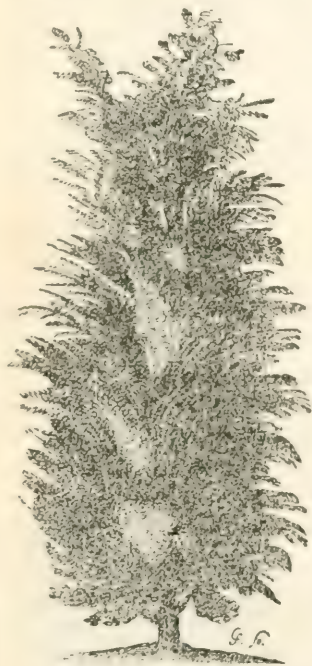
twenty feet high, and quite narrow. It also bears clipping well, and may be kept as small as desirable. It is hardy as far north as lat. 42°, but not much farther. We can not recommend a tree for a cemetery unless it be perfectly hardy, as so few would be willing to take the trouble to give protection, as is done to half-hardy trees in pleasure-grounds.

The *Siberian Arbor Vitæ* (*Biota Tartarica*) is a species or variety not very widely disseminated, but we think the best of all. It is very compact, perfectly pyramidal, and of a fine color. Hardy in any part of this continent.

The *Golden Arbor Vitæ* (*Thuja aurea*) is a very handsome variety of the Chinese, we believe, with a light yellowish-green tint.

There are several others which we have not tested so fully as to be able to speak decidedly of their merits.

Among the Junipers our *Red Cedar* (*Juniperus Virginiana*) is well known, being indigenous to many parts of the country. It is a tree that varies greatly in habit when grown from seed. Some on our grounds are compact pyramids, as regular and stiff as though they had been shorn; while others are loose and straggling, with drooping branches; some light, and others dark green: and all from the same seed-bed. In all cases we consider it a fine evergreen tree, of small or medium size.



TALL JUNIPER.

The *Tall Juniper* (*Juniperus excelsa*), which is said to have been found in Siberia, on the Rocky Mountains, and on the Himalayas, is an elegant, erect, tapering tree, which attains the height of twenty or thirty feet. When young the branches are upright, but as it grows older they spread. It is quite hardy at New York. The foliage is of a silvery or glaucous green. It is strange this tree has not been more extensively cultivated.

The *Common Juniper* (*Juniperus communis*) forms a handsome, erect tree, twelve to eighteen feet high, with rather open, spreading branches. Foliage sharply pointed; dark green underneath, and silvery above.

The *Swedish Juniper* (*Juniperus Succica*), supposed to be a variety of the preceding, is more compact and formal in its growth.

The *Irish Juniper* (*Juniperus Hibernica*), also supposed to be a variety, is remarkable for its tapering cylindrical habit, like the Irish or Upright Yew. This we consider one of the best of all the Junipers for planting on small cemetery lots; but it is not perfectly hardy in all parts of the country. It stands unprotected at Rochester in sheltered situations, but suffers when fully exposed. It grows slowly.

The *Weeping Common Juniper* (*Juniperus communis pendula*) is a variety with



drooping branches; the young shoots hang perpendicularly downwards. We have not yet seen good specimens in the open ground, but think it must be a very graceful tree, and most appropriate for cemeteries.

There is also a weeping variety of the *Red Cedar*, (*Juniperus Virginiana pendula*), which has been sent us from Europe. It is a remarkable tree, and must have a very graceful appearance; but we have not yet seen a large, well grown specimen, and can not therefore recommend it decidedly.

The *Chinese Juniper* (*Juniperus Chinensis*) is a very handsome, compact, little tree, which proves perfectly hardy here, and keeps its color remarkably well all winter.

There are many more interesting species and varieties of Juniper, but those we have mentioned are the principal ones which we would recommend to the attention of persons selecting trees for cemeteries. The common Juniper and the Red Cedar bear the shears well, and make fine green walls and hedges. By tying in the branches, and clipping, they may be trained into the most formal figures, or kept within very narrow bounds.

The Yews, from their wonderful longevity, and their dark, unchanging verdure, have a sombre and solemn expression which belongs to no other tree, and which in all ages has caused them to be regarded as the most fitting ornament for the church-yard. There are specimens now in existence that are almost as old as the world, or at least so old that their history appears somewhat fabulous. Their growth, however, is very slow.

The *English*, or *Common Yew*, (*Taxus baccata*), forms a compact, bushy tree, quite hardy as far north as Rochester, and its color remains unchanged by the winter. It thrives best on good, deep soil.

The *Irish*, or *Upright Yew*, (*Taxus erecta*, or *Hibernica*), is a curious, erect, cylindrical tree, no wider at the height of twelve or fifteen feet than at the bottom. It is much less hardy than the preceding, requiring protection here. It is a tree that should be planted wherever it can endure the climate.

The *American Yew* (*Taxus Canadensis*) is a handsome, low, spreading tree, less erect, and with smaller, narrower foliage, than the English, or Common Yew. It abounds in the shade of the forest, in dry, rocky situations, and thrives very well in the open ground, but partially loses its verdure in winter. It should always have shade where practicable.



ENGLISH YEW.





IRISH OR UPRIGHT YEW.

All the Yews succeed well in the shade of other trees. Beautiful hedges may be made of either the English or American, as they bear clipping or shearing to any extent. There are many new varieties of Yew recently introduced, but we can not speak satisfactorily of their merits from the small specimens we have seen. A weeping variety of the English Yew, with broader leaves and drooping branches, promises to be an acquisition to the class of trees we are now considering.

From these three genera of evergreen trees—the Arbor Vitæ, Junipers, and Yews—a selection of beautiful and appropriate trees may be made. Where larger trees can be planted, the *Hexlock* (*Abies Canadensis*) is one of the most elegant trees—branches gracefully drooping, and the foliage dark green at all seasons. The *Balsam Fir* (*Abies balsamea*) is a handsome, stiff, conical, dark green tree. The *Norway Spruce* (*Abies excelsa*) is a magnificent tree, with drooping or curved branches, and of a pale green color. This tree attains a great size, and requires plenty of space to display its character and beauty.

In the January number of our present volume we noticed a few weeping deciduous trees, and there are others which we shall notice hereafter—some new weeping Birches, Thorns, and others of small size, worthy of attention.

### THE WHITE DOYENNE PEAR.\*

SYNONYMS: *Virgalieu*, *St. Michael*, *Butter Pear*, *Large Yellow Butter Pear*, *White Bourré*, *Bourré blanc*, *Doyenné*, *Doyenné blanc*.

This is one of the oldest, most widely known, and extensively cultivated Pears. Its importance in this country far exceeds that of any other variety, the largest Pear orchards in this State, and perhaps in the Union, being planted with it exclusively. The revenue derived from its sale in our markets amounts probably to as much as that of all other varieties combined. We need, therefore, offer no excuse for giving a portrait of it, even if it be well known to a large number of our readers. It can not be too well known, nor too highly prized.

In the Western States it is succeeding admirably, as far as we have heard of its being tested; and we have not the least doubt but that it will there become what it now is in Western New York—the most profitable and popular Pear for extensive culture. On the sea-board, for a long time it cracked, and was entirely worthless. KENRICK, some twenty years ago, classed it among Pears of “indifferent quality;”

\* See Frontispiece.

but latterly the Boston and other eastern growers have produced it in the greatest perfection. At the shows of Worcester, Boston, and other places, for a year or two past, the contributions of this variety have been such as to excite general remark and admiration. This is partly owing to superior culture and management, and partly to the use of Quince stocks.

The name "*White Doyenne*" has been generally adopted since the publication of "*Downing's Fruits and Fruit Trees of America*." Previous to that time it was known in New York as the *Virgalieu*, sometimes *Vergaloo* and *Bergaloo*. In the Eastern States it was known as the *St. Michael*; in New Jersey, Pennsylvania, &c., the *Butter Pear*, *Large Butter Pear*, &c. In COXE'S work it is described under the name, "*Yellow Butter*, or *Beurre Doré*, or *St. Michael's Pear*."

Mr. FLOY, in his last edition of LINDLEY'S "*Guide to the Orchard*," published so late as 1846, describes the "*New York Virgalieu*," and gives the following synonyms: *Williamson's Virgalieu*, *Virgalieu*, *Bergaloo*, *Surpasse Virgouleuse*, *Columbian Virgouleuse*, *Columbia*, *St. Michael*. The *White Doyenne* he declares "beyond question" to be a distinct fruit, and goes on to describe minutely the difference between it and the "*New York Virgalieu*." If Mr. FLOY had committed such errors twenty or thirty years ago, it would have been pardonable; but that he should do it in 1846, is certainly surprising. To make the *White Doyenne* and *Virgalieu* different, is bad enough; but to make this and *Surpass Virgalieu* and *Columbia* identical, is still worse, because these last named are totally distinct in season, appearance, quality, growth, and *everything*.

The common names in England, among nurserymen and cultivators, are *White Beurre* and *White Butter Pear*, and it is described in several English works under these names; but the London Horticultural Society has adopted *White Doyenne* in their catalogue, and so has RIVERS and others of the more intelligent nurserymen. In France it is known both as *St. Michael*, *Beurre d'Oree*, and *Doyenne blanc*. The latter name prevails in books and the more correct catalogues. *Beurre blanc* in France is a synonym of their "*Bergamot d'été*" and our *Summer Francreal*. In Belgium it is variously called *Beurre blanc* and *Doyenne blanc*; and in Germany, *Weisse Herbst Butterbirne* (White Fall Butter Pear), and also *Beurre blanc* and *Doyenne blanc*, as in Belgium.

Fruit—variable, both in size and form, according to vigor of trees, stock, &c.: on young trees and on Quince stocks it is usually quite large; while on old trees or Pear stocks it is only medium or small. General form obovate; sometimes roundish, and sometimes considerably pyriform. Surface—pale yellow, becoming deeper and brighter when ripened in the dark; has frequently a blush or dash of bright red on the sunny side. Stalk—about half an inch long, variable, rather stout, slightly sunk. Calyx—small, shallow. Flesh—white, fine-grained, melting, buttery, rich, and delicious. The tree is an erect, handsome grower. Shoots—yellowish-brown, moderately vigorous. Succeeds well, and bears early and abundantly, both on Pear and Quince stock; on the latter stock it is said to do well in some localities where it fails on the Pear.

There are many trees through Western New York, receiving very little care, that

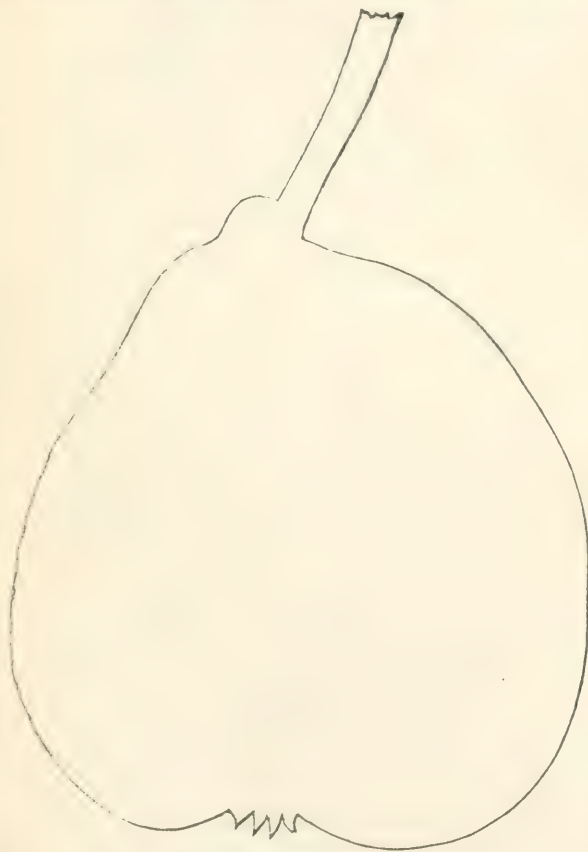
are producing from twenty to thirty bushels of fruit, which commands in any market at least two dollars per bushel.

When desirable to retard its ripening to a late period, it should be gathered late, and ripened in a cool, dark room. In this way it can be kept in fine condition into the month of December, in localities as far or farther north than Rochester.

### THE BEURRE VAN MONS PEAR.

BY H. W. TERRY, HARTFORD, CONN.

I SEND you a description and drawing of the *Beurre Van Mons* Pear. Perhaps you will recollect that I exhibited it at the second fruit convention, at Castle Garden; and if I mistake not, I sent you some grafts that season. We have had it in bearing here six years, and esteem it as ranking among the "best" Pears.



BEURRE VAN MONS PEAR.

Tree—of tolerably rapid growth. Shoots—vigorous, upright. Young wood—dusky yellow. Leaves—four or five from one bud, like *White Doyenne* or *Flemish Beauty*. Primary leaves—large, oblong, slightly crenulate; footstalks about an inch and a half long. Secondary leaves—narrow, recurved, folded, with short footstalks. Fruit—medium to large, varying much in form. Skin—rough, greenish-yellow, and nearly covered with yellow russet. Surface—irregular, somewhat knobby. Stalk—an inch and a quarter long, with a fleshy base or lip. Calyx—erect, sometimes

open, often placed on a singular fleshy ring. Basin—shallow, irregular. Flesh—



rather coarse, juicy, melting, rich, slightly acid, mingled with sweet, and a peculiarly fine aroma. Season—October to middle of December. It grows very finely on Quince, is a good and regular bearer, and the fruit is equalled by few autumn Pears.

## CURRANTS.

BY JOHN SAUL, WASHINGTON, D. C.

WERE we to search through the whole catalogue of fruits, we could not find one possessed of so many sterling good qualities as this; and yet how much neglected. I was much pleased with the plate in the January number, accompanied with the editor's excellent remarks. Well has he described the little regard paid either to its planting, after culture, or the improvement of the race. In the latter particular I know of no fruit more susceptible of improvement. We have Reds of various shades of color and length of bunch; some very acid, others again agreeably sweet. There are Whites with fine long bunches, yet wanting the flavor of the old small variety. While we have now Blacks with fair sized bunches; I say fair sized, for Blacks are not yet what they might be. What an extensive field for the hybridist—one that promises a rich reward; for we have size, flavor, and color. With such materials to blend together, the skillful hybridist can not fail to improve this class of fruits.

Having cultivated for some years several varieties, I will give a list of them, noting what I may consider best.

1. *Champagne*.—In foliage, wood, and habit, this belongs to the Red class. Color delicate rosy-pink, and would appear like a cross between a Red and White, from the color of the fruit; but wood, foliage, and growth, set it down at once among the Reds. This variety is scarce in England. The bunches are small, yet it is much in demand, where known, for preserving.

2. *Red Dutch*.—"Bunches short. This is a sweet, rich, and good Currant." Thus has it been described by Mr. RIVERS, in the last edition of his catalogue. When we consider the many good qualities of the *Red Dutch*, it is a free grower, a good bearer, a fair sized bunch, with large, high colored, rich berries; and above all, for jams and jellies it has no superior, if it has an equal. It is one of the best Red Currants.

3. *Red Dutch, Long-Bunched*.—This is a fine long-bunched, large-berried variety of the above. It is later, and rather more acid.

4. *Red Grape*.—A very fine long-bunched variety with large berries, but very acid.

5. *Knight's Early Red*.—Bunches and berries about medium size, moderately sweet. A very good early Currant.

6. *Knight's Large Red*.—Bunches long, berries large, medium season. A fine large Currant, but inclined to be acid.

7. *Knight's Sweet Red*.—A really good, sweet, Red Currant, with long bunches and large berries.

8. *Pulmer's Large Red*.—In this we have a very fine, long-bunched, large-berried

Currant; a vigorous grower and an abundant bearer. It is extensively cultivated in some localities in England.

9. *Pitmaston Sweet Red*.—Bunches short, with berries below medium size. This is the sweetest of all the Red Currants. Raised by Mr. WILLIAMS, of Pitmaston.

10. *Victoria, Ruby* or *Houghton Castle*.—The bunches are longer than any other variety. A free grower and an abundant bearer. Perhaps on the whole the finest Red Currant known.

11. *Red Striped-leaved*.—A poorly variegated variety of a bad Red Currant. Unworthy of culture, either for its foliage or fruit.

12. *Black Bang-up*.—A good variety of Black. Bunch and berry nearly if not quite as large as *Black Naples*.

13. *Black Naples*.—Considered the best of the Black Currants, and I think deservedly so. Bunches of fair length. Berries large.

14. *New Dwarf Black*.—This variety promises well. It is of more dwarf habit than the other Blacks, and in bunch and berry equal to *Black Naples*.

15. *Green-Fruited Black*.—Wood, foliage, and growth, is that of the Black; while the fruit when ripe is green. In flavor it will not approach the other Blacks. It is a most singular variety, but is worthless as a fruit-bearer.

16. *Variegated-Leaved Black*.—Here again we have a badly variegated foliage, and a poor fruit. Not worth cultivating.

17. *Old White*.—This variety now is but seldom to be met with, the larger varieties having taken its place. The bunches are short; berries small, amber-colored or nearly so, and of higher flavor than any of the other Whites. This should be borne in mind by the raisers of new varieties.

18. *White Dutch*.—Bunches of fair length; berries large, deep in color, and of high flavor. This is a very fine variety; every point considered, perhaps the finest of the White Currants.

19. *White Grape*.—Bunches long; berries large, pale, not quite as high flavored as the *White Dutch*. As a general rule, the closer a White Currant approaches in color to amber, the sweeter and richer in flavor it is, like a finely ripened *Muscat Grape*.

Some of the finest Currants I have ever seen grown were in the Isle of Wight. In Guernsey and Jersey they grow equally fine, more particularly the Reds and Whites. The soil was a strong, adhesive loam, resting on clay, but a well drained bottom. The climate is very genial, and the fruit is not only large and well colored, but finely ripened. In the market gardens about London they are excellently grown and managed somewhat in this way. They are planted in lines at given distances apart—say twenty or thirty feet row from row, and three or four feet apart in the rows. The ground, which is naturally good, is highly manured, and cropped between with vegetables. The plants, after the first year or two—when they commence bearing—are pruned very hard. Perhaps it will be better understood what I mean by hard, when I say the greater part of the young wood is thinned out, and what is allowed to remain is shortened back to two or three inches. By this means the trees are always

kept short, never attaining a greater height than two or three feet. The bushes being low, with well-thinned-out and shortened branches, they shade little or none of the ground, and are cropped up to the bush. These strong manured and well pruned trees produce magnificent fruit, and in great abundance, well remunerating the market gardener for his trouble.\*

What will the advocates of no pruning say to this? Yet the Currant, like the foreign Grape, must be pruned, and pruned severely, if fine fruit is wanted. The Black Currant will not submit to this treatment, bearing as it does on the young wood. The latter must be thinned out, and when over-long, moderately shortened. The pruning must be varied to suit the age and vigor of the tree.

There are many soils in which the White Currant will not grow—ground to all appearance of the best description, and in which the other Currants grow finely; yet in these soils White Currants will scarcely live—grow they will not—showing there is something wanting in the soil necessary for the well-being of the plant. Perhaps chemistry could step in to our aid, and tell us what this essential is. Again we meet with soils where the Whites vie in vigor with the Reds—ground which may be to appearance no better than the other. In a general way, it is more particular to soil than either Reds or Blacks, which will grow in almost any.†

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## THE CULTURE OF CELERY.

BY WILLIAM CHORLTON, NEW BRIGHTON, STATEN ISLAND.

CELERY has become so generally admired a vegetable, that a large supply both for market and likewise in every private horticultural establishment, is now an indispensable necessity. This supply is to some extent furnished according to the continually increasing demand; but like many other things of a similar character, the quality does not improve with quantity. We have ample demonstration of this fact in the poor samples which make up the aggregate bulk in each and every green-grocer's stall. The ready sale and remunerating prices for the greatest number, seems so far to have eclipsed the idea of good culture. The requisite care, more ample space, and increased expense of a given quantity, have no doubt counteracted against improvement.

Now, whether this has been or is likely to continue to be a wise policy, is easily proved. At present, the common custom is to tie three and sometimes four heads into one bunch; and the whole of this bundle does not contain more eatable substance than any ordinary family would consume at one meal, the imperfectly blanched portion of each being not more than a foot, and sometimes only six inches in length, with correspondingly small size,—tough, bitter, and unwholesome, each head weighing from a half to three-fourths of a pound. This is about a fair average standard. It is

\* Close pruning and high manuring agrees with the Currant just as well in America as in England.—Ed.

† According to our experience the Black Currants require more moisture than either the Red or White. They form immense masses of small, fibrous roots, like the Ash, which absorb moisture like a sponge.—Ed.



true that two such heads can be grown in the same space, and with as little labor and expense, as one of really good quality; but take into consideration the difference of that quality. The stalks of a good sample are blanched two feet, being broad, solid, crisp, perfectly white, and possess an aromatic, nut-like flavor, free from drastic bitterness, and contains from two to three pounds of usable matter. Surely, one head of this is worth as much, to say the least of it, as are the three or four of the above inferior stamp; and as the good one has only cost the same as two of the poor ones, there must be a saving to the market-gardener by resorting to better cultivation. That the above described better quality would command as great a price, weight for weight, requires no argument to prove; and the good housewife would rather purchase one head which would contain more in bulk than the three, at the same price. Besides, regard to health is a matter of some consequence.

Celery in its wild state is a bitter and drastic poison; under cultivation it becomes a wholesome esculent. In a green state it is nauseous to the stomach; but blanched it becomes somewhat carminative and tonic—the injurious combinations are thereby prevented from assimilating in its structure, and we have a most agreeable addition to the list of edibles.

Scientifically, Celery belongs to the well-defined family Umbelliferae, the structural appearance of which are easily recognizable. Notwithstanding this, the medical properties are very different; for we have the deadly cold Hemlock and the carminative Anise, the nauseating Cynapium and the nutritious Carrot, the poisonous Cicuta and the wholesome Parsnip, placed in close proximity with our present subject, and which is only another kind of Parsley—the *Apium graveolens* of botanists. Its native habitat is along shallow ditches and low, partly submerged edges of swamps, generally not far removed from the sea shores of Britain. In this state it has a very uninviting dark green hue, lies flat near the ground, being bitter and drastic, and is anything but like the pleasing object as we see it while lying cleanly washed and white upon our tables. In a native state it produces nausea and vomiting; and although not very virulent, is nevertheless poisonous, on which account it is well not to eat the green leaves or the stalks unblanched. Some persons may not feel any inconvenience from casually indulging this practice; but if often repeated, the ill effects will most assuredly be felt.

Celery is a biennial plant; that is, the radical leaves are formed the first year, and the second it develops the flower-stem, ripens seed, and dies away. It is only fit for use in the first season, before the flower-stalks are produced, and is only propagated from seed.

In order to make the subject clear, I will divide it into the following paragraphs: *Management of the Seed-bed, Planting out, Earthing, Protection in Winter, and Saving Seed.*

*Management of the Seed-Bed.*—From the beginning to the middle of April is the best time to sow. Prepare a spot of tolerably rich ground by well digging and breaking up the clods with the spade. There is no occasion to use a rake, unless very stony; a good knocking up with the spade is far better, as the soil is left more open

and loose below, in which state the surface will keep damp longer—a matter of importance to seeds which are vegetating. Next take a small hoe, and draw drills about half an inch deep and a foot apart; into these scatter the seed evenly, about so thick that an ounce may sow two rods of ground. After all is sown, go along each drill and cover in with the side of your foot as you pass along, at the same time press down the soil. A little care will enable the operator to make a neat finish in this way, and it is far preferable to rolling all the largest lumps into the drills, as the rake is subject to do. The seeds by this course are all more equally covered, and the soil is in close contact with them.

At this time we generally have a repetition of warm showers, which is sufficient to encourage germination; but if the weather should become very dry, recourse must be had to artificial watering. If so, do not give frequent sprinklings, but a good and careful soaking. Small dribblings from a watering-pot only bakes the surface without dampening below, and does more harm than good.

When the plants are well above ground, look out for weeds; keep all clean, and thin out if too close. Remember that nothing deteriorates the quality of Celery more than a check during growth. Do not begin too early; but when a start is made, keep it going. One way to prevent this check is by timely thinning. Keep each plant asunder from its neighbor; and as they continue to get larger, if still too crowded, remove more. Attend to watering if the ground gets very dry, but not otherwise. By the beginning of July the plants will have obtained sufficient size for transplanting into the trenches, and if thus treated will be stiff and stocky—each of them a good handful, and a very different sample to what is too often seen.

*Planting out.*—The plot for final planting should have been forecast in the mind, and may have been occupied by some other crop which is already used up. My own practice is to choose a piece wanting in manure, and sow peas in rows six feet distant from each other; and while they are on the ground, plant the Celery midway between the rows. The Peas in this way act as a shade to the newly removed plants, which is of service till they get established; and the previously hungry land, which was most suitable for Peas, is rendered fertile for future crops by the manure used for the Celery. Let the trenches in all cases be six feet apart, which is not too much to allow space to earth up with. Commence by opening six inches deep and eighteen inches wide. Throw the soil neatly on each side, which will raise the surface about two inches, making the trench eight inches deep, into which convey a liberal dressing of well-rotted barn-yard manure—say one barrow-load to each four yards in length. Level and break up well; and when this is accomplished, begin at one end, fork in the manure, and loosen the bottom, bringing up so much soil as will mix with the dung in equal proportions. Afterwards take enough of that which was previously thrown out and fill in another inch. This will serve as a good base to plant in, and keep the injured roots from coming into immediate contact with the manure.

All being now ready, stretch a line along the middle of the trench; proceed to the seed-bed with a basket or some convenient substitute, lift the plants one by one carefully with a trowel, bring away as much earth as they will carry, place them in the

basket, and plant on *each side* of the line, six inches from it. This will give a double row, each being a foot asunder. Let the plants be eight inches apart in the row. In planting, do not use a dibble, but lift the soil up with the hand, place the plant in the hole thus made, fill in again, and pack nicely around it. Hands were made before dibble-sticks were known, and the hardy fingers of the husbandman are not injured by poking them into well loosened mold. As each row is finished, have in readiness the watering-pan, and, unless the weather be very wet, give a good supply of water overhead, which will fix all firmly, and "they will never know that they have been removed."

This will appear a very tedious process to some of our rough-and-tumbles, I am aware; but the end justifies the means, and the extra care bestowed is more than counterbalanced by the greater success afterwards.

There is one point more than all others that I would impress upon Celery growers—namely, *never let your crop cease growing until it is ready for use*. If the intervening spaces have borne a crop of Peas, they will be ready for removal when the Celery has advanced a little in size, and the ground may be then cleared and dug over. However this may be, at this stage loosen up the outsides of the trenches and fill in a little around the plants, during which operation lift up the leaves and press loosely an inch or two of earth around the base of each plant. This will tend to give an upright growth, and prevent bulging at the bottom. If the weather be dry, give a liberal supply of water, not little and often, but a thorough drenching. One good application is worth twenty sprinklings.

(*Earthing, Protection in Winter, and Saving Seed, in next number.*)

## PRUNING AND MANAGEMENT OF THE PEACH TREE.\*

### V. *Winter-disbudding.*

120. This operation is performed at the same time as the winter-pruning and nailing. Although it is but little practiced at Montreuil, I shall notice it lest it should be supposed that we are ignorant of it. It consists in removing with the fingers the wood or fruit-buds that are considered useless, and of which the growth would be likely to absorb that sap which would prove beneficial to the buds retained. On the wood-branches, the eyes that push before and behind are taken off when it is certain they are useless; also some of the double or triple eyes that are often found at their extremities, when it is needful to moderate the strength of the branch. On the fruit-branches, those wood-buds are taken off that are likely to prove prejudicial to the one at their base. This operation should not be performed without due reflection, because, if done rashly, thereby destroying too many eyes, it may prove fatal by reason of the frosts, which often come on unexpectedly. It is always better to have too many than too few eyes. In fact, I do not much approve of winter-disbudding, because the sum-

\* Continued from March number.



mer-disbudding is an excellent means of regulating the growth of the tree with much greater certainty; for when it is performed, the more advanced state of vegetation enables us better to distinguish the growths which ought to be removed.

121. The same holds good with regard to removing the eyes from the upper fruit-bearing branches, which, when pushing vigorously, have their bases furnished with several wood-eyes, while their flower-buds are situated towards their extremities; so that in pruning, to have fruit, they must be left long. In such a case, the two eyes nearest the base are retained for successional shoots; and in order that their development may not be prevented, the other wood-buds, between the two lower and the flower-buds, are removed at the winter-pruning, or after they have pushed in spring, as I shall hereafter explain. The first proceeding is without any inconvenience in full-grown trees, where the sap does not flow so strongly; but, in order to make this suppression in young and vigorous trees, it is better to wait till the eyes push young shoots, so that sufficient time for a partial diversion of the sap may be given, thus preventing it from flowing too strongly towards the successional shoot.

#### VI. *Disbudding, or Removal of Young Shoots.*

122. Disbudding is the suppression of all the useless or badly-disposed shoots and laterals, with the intention of concentrating the sap, of encouraging the growth of the young shoots retained, and of keeping a sufficient space in which to nail them with regularity and symmetry. Disbudding, to produce the best results, should be divided into two distinct operations. The first takes place as soon as all the buds of the Peach tree become developed into young shoots, so as to enable us to know the ones that are unnecessary; it is the operation subsequent to the winter-nailing. The second takes place successively as vegetation proceeds, and applies to the laterals as well as to the primitive young shoots.

123. The first operation is a very good substitute for winter-disbudding, which I do not recommend. It most commonly takes place early or late in May, according as vegetation is more or less forward; but always before the young shoots have acquired too much strength. If we deferred too long, the suppression of the young shoots would cause a great derangement in the circulation of the sap. It is, therefore, very important to make the first removal of young shoots while the latter are herbaceous, and scarcely three-fourths of an inch long. It is performed on the fruit-branches in the case mentioned at 121, and on shoots of the former year which terminate the wood-branches recently pruned. In fact, these shoots, the result of the former year's pruning, will have formed a great number of triple eyes, more especially on strong trees. These eyes, opening at the same time, would produce young shoots, which, if retained, would consume too great a quantity of sap. For this reason, the middle one, which is always the strongest, must be invariably suppressed at the time of its first starting into active growth, preserving only the best-placed of the remaining two, in order that it, and others managed in the same way, may, on their becoming fruit-branches, regularly furnish the principal branches. With respect to double shoots, the same procedure is adopted as in the two latter cases. This first disbudding is of very great

importance for ensuring the beauty which a tree presents when its principal branches are regularly furnished with bearing-shoots, and for the maintenance of an equal growth throughout the tree. It may be performed by the hand on the fruit-branches, and with the point of the pruning-knife on the prolonging shoots of the wood-branches.

124. It is always worse than useless to cause a waste of sap, for the latter is often too scarce in the lower branches. The removal of young shoots in well-managed trees ought, therefore, to be made at different times, as circumstances may require; for if we wait till there be too great a number of young shoots to be suppressed, it might cause the loss of the tree. There are, however, some cultivators who disbud only once, usually in July, and who cut off in one day all the useless young shoots. This is a great error; the absence of fruit-branches in so many Peach trees at Montreuil is almost solely attributable to the removing, at one time, all the useless young shoots and laterals.

The second disbudding is performed with the pruning-knife, cutting off the young shoots that are to be removed, as closely as possible to their insertion.

#### VII. *On Pinching.*

125. This is a most important operation. It consists in the suppression of the herbaceous extremities of young shoots. These are taken off by pinching them between the nails of the thumb and fore finger. It is done with the view of diminishing the growth of those shoots which push too vigorously; while at the same time the sap that these would have otherwise appropriated is turned to the advantage of the weaker shoots. Pinching differs from disbudding, inasmuch as it is only a temporary way of checking the excessive growth of a young shoot; while disbudding is its total extinction.

126. For this reason we pinch nearly all the young shoots, the growth of which we find it necessary to moderate, wherever they may be situated; and this is also frequently done with the view of assisting the development of other shoots. Thus we pinch the terminal shoot of a branch that has reached the desired length, in order to stop the sap, and turn it to the advantage of the lower shoots and eyes, a greater development of which is necessary to the end in view.

127. Pinching requires a great knowledge of the mode of vegetation of the Peach tree. It is indispensable for trees on walls, and it is more especially necessary for the upper parts where the sap flows most strongly. This operation is performed at no fixed period, but is done when the tree requires it. It must be several times repeated from the end of April till August, the particular periods being regulated by the state of vegetation in different trees, and by that of different parts of the same tree. When the balance of the tree is threatened, recourse must be had to pinching. It is well, therefore, to watch the progressive indications of the flow of sap; for in consequence of strong shoots resulting elsewhere from its check by the first pinching, the operation frequently becomes necessary on them. Those young shoots, which, by their appearance or position, promise to become very strong, should be pinched before they reach the same length as the others that are less favorably situated, and not so well estab-

lished. The former should be pinched when three or four inches long; the others must be left untouched till they attain the length of from twelve to sixteen inches. In every case we must bear in mind the necessity of preventing the eyes that form on the young shoots, and especially those on their bases, from becoming blind, which might take place if the shoots were allowed to grow too long. We must also avoid, as much as possible, the pinching of them before they are of sufficient length, as it is likely to make them produce laterals. I usually pinch the young shoots behind a leaf, so that the tree does not appear to have undergone the operation; and many cultivators wonder at the regularity and well-balanced strength of its shoots.

128. Some laterals can not be prevented from forming on the young shoots that are retained, and particularly on those which have been pinched. The laterals which push on the leading shoots should, for the most part, be pinched when six to eight inches in length, above the second, or from that to the sixth leaf, according to their strength. On the leading shoots, pinching should be preferred to disbudding, which entirely destroys the origin of the lateral. Pinching, moreover, is favorable to its good organization, by encouraging the eyes that are formed along its base, and which fit it for becoming a fruit-branch on the prolonging shoot when the latter shall have become a wood-branch.

129. It is by no means uncommon for the terminal shoots of fruit-branches, situated on the upper sides of the principal branches, to grow to an extent likely to prove hurtful to the successional shoot. The former must then be pinched, but leaving it so long as not to make too much sap flow to the latter. If this pinching cause some of the eyes to burst into laterals, it must be discontinued, and the shoots must be cut down to the lowest lateral by a summer-pruning. If, in its turn, the young successional shoot acquire too much strength in consequence of these operations, we must endeavor to moderate it by pinching. If, occasionally, some of its eyes push laterals, it may be cut down, by summer-pruning, on a dormant eye; or, if none such exist, on its lowest lateral.

130. With respect to the laterals which break out prematurely on the young shoots, pinching is much more important for those situated on the upper side than for those on the lower. The latter, from having a less flow of sap, do not always require to undergo this operation.

131. Pinching being an operation entirely depending on foresight, it should be well considered; for when carried to too great an extent, its effects are disastrous: therefore I recommend great care to be taken in practising it; and I may say, that on my trees only a third, at most, of the young shoots undergo the operation.

#### VIII. *Thinning the Fruit.*

132. The danger of frosts, which are often so fatal to the blossoms of the Peach tree, obliges us, at the time of pruning, to retain more flowers than is absolutely necessary; and if the weather be favorable, too many fruits is the consequence. Fructification being a very trying process, the trees might be injured by its being allowed to take place too extensively; therefore an excessive setting of fruit must be



prevented. Nevertheless, in years when only a moderate quantity sets, the thinning should not be made till the month of June, the time that the stone is formed, which is a crisis at which much fruit drops. When those that remain appear secure, the superabundant ones are removed, so as to leave only as many as the tree can bring to perfection, and nourish without exhausting itself. In this operation, the fruits that are too close together are thinned out, so as to distribute the whole equally, and as near as possible at uniform distances, giving the preference to those that are best placed, and of a regular form.

133. We first thin out those fruits that are at the tops of weak branches, or on branches of which the successional shoot appears weak; and there is always a less number left on the lower than on the upper parts, although the former have more flowers. The fruits to be removed must be detached by turning them with the thumb and the two first fingers, without jerking, taking care not to break off those intended to remain. When the growth of the tree is well balanced, the number of fruits left on each wing must be as nearly equal as possible; and if the thinning is well done, a sort of regularity is obtained which would make one believe that they had been placed on by hand. The green Peaches taken off may be turned to account by the confectioners. Notwithstanding the number of fruits dropped and thinned out, I still leave on each square-trained Peach tree, about four or five hundred Peaches, which, from their beauty and nearly equal size, well repay the trouble I take.

134. But in abundant seasons, if we did not thin till the stone is formed, the tree would be weakened. In such a case, the thinning should be made at two different times: the first in June, when all that are evidently superfluous must be thinned out; and the second after there is no danger of their dropping.

135. The greater or less quantity of fruit is a means of equalizing the strength of the different parts of the tree, as will be further explained.

### IX. On Summer-Pruning.

136. The object of this operation is to remedy any bad results of winter-pruning, of pinching, and of omissions in the disbudding; also to concentrate the sap in the tree, by removing those useless productions which would have to be cut off at the winter-pruning, and which, meanwhile, would have fed on the sap at the expense of others necessary to be preserved.

137. Summer-pruning, which is performed with the sécateur, or with the pruning-knife, as may be requisite, is less applied to the wood-branches than to the fruit-branches, especially when the winter-pruning is well done. The following, however, are some circumstances where it should be employed. When the extremity of a vigorous young shoot has been too severely pinched, the upper eyes usually open at the same time, and several laterals are formed causing great disorder. These are perhaps pinched in their turn, and very often the result is a crowd of young shoots, originating near the same point. Such agglomerations receive the name of *willow stools*; they consume a great quantity of sap, and tend to impoverish the neighboring shoots. In this case, all these injurious shoots must be cut down to one of the lowest and

weakest laterals ; and the growing-point must be pinched before there is time to form eyes along the shoot. The consequence is, the sap, finding all outlets at this part temporarily closed, turns into other channels before the former can be re-opened.

138. The removal of any shoot, and particularly that made after the second growth, of August, when the base of the shoot becomes woody, is in fact a summer-pruning.

139. It often happens, in the square form of training, that the upper secondary branches of a completely formed tree make two strong growths in the early part of the growing season, notwithstanding the pinching of their terminal shoots and their laterals. In such a case we must cut back to a weak lateral, which then becomes a fresh leader

140. With regard to the other wood-branches, it is only in case of accident to their extremities, such as breakage by the wind, severe disease resulting from gumming, or from any other cause injuriously affecting the leading shoot, that we must prune back in summer to a lower shoot suitable for succession. In doing this, we must take into account the position of the branches, and their relative force, so as to choose one more or less vigorous, which must afterwards be treated according to circumstances.

141. Summer-pruning is to the fruit-branches what disbudding is to the superfluous shoots. It sometimes happens that, deceived by appearances, we retain some fruit-branches which eventually do not realize our expectations, and which would otherwise have been cut off ; they must be cut down on the young shoot nearest to their base, in order to get rid of the useless wood, and to encourage the growth of this young shoot, which is intended to become a fruit-branch next year. This suppression prevents a useless absorption of sap, and it not only prevents confusion, but likewise admits a freer circulation of air. It is also at the summer-pruning that the extremity of the successional shoot is cut down on the lowest lateral of those induced by pinching. In this respect summer-pruning is very important ; for it concentrates the sap, and greatly benefits the part retained, which, in consequence, becomes furnished with wood and flower-buds (126).

142. It also often happens that a fruit-branch of the first sort (77, 78,) has been left longer than desirable, in order to prune in winter to a wood-bud ; and which fruit-branch at that time had not a pushing-eye at its base, but has since produced one. In that case, although the fruit-branch may be in bearing, we cut it back to the young shoot at its base, in order not to lose the opportunity of thus obtaining the successional shoot.

143. Summer-pruning is performed according as it is found necessary, and every time the shoots are nailed in during summer, until after the fruit has been gathered. The more it is attended to, so much the more is the winter-pruning advanced.

### *X. Defoliation.*

144. The object of this is, to remove leaves that shade the fruit so as to deprive it of the amount of light necessary to give it the proper flavor and color.

145. The leaves are taken off at several times. We ought not to commence uncovering the fruit until it is about to accomplish its maturity ; that is to say, when the Peaches are nearly at their full size. They are not exposed all at once to the sun, nor are all on the same tree uncovered at one time, at least when not grown for sale,

as at Montrouil. The colder the season, the more leaves are taken off. It must not, however, be forgotten, that an excessive defoliation may prove detrimental to the full development of the fruit; and that, as leaves are essential to the existence of the eyes, or buds, that grow from their axils, it is necessary to cut the leaf with the sécateur, and to retain the petiole, and sometimes a third or half of the leaf, in order to preserve the embryo buds. It is also important not to take off any leaves from weakly shoots, the growth of which requires to be encouraged. Defoliation must be so performed as to assist the maturity and coloring of the fruit, taking care at the same time that it may not prove prejudicial to those young productions that should insure us future crops.

(To be continued.)

## WILLOWS AND WILLOW CULTURE.

BY CHAS. DOWNING, NEWBURGH, N. Y.

WHEN we consider the variety of profitable uses to which Willow may be applied, and the extent to which it is cultivated in other countries, the question is suggested, Why has so little of it been grown hitherto in the United States? A satisfactory answer may be found in the following considerations: The most vigorous growers of England, whose succulent leaves present a fine delicate texture, are not able to withstand the drying winds and scorching suns of American summers; consequently the growing is, at the approach of hot weather, either stopped for the season or suspended, until the warm rains of autumn produce an aftergrowth that is so feeble and branching as to be worthless; or, in some varieties, as *Caprea*, the shoots become so rigid and wanting in pliability that they are of little value. *Salix viminalis*, of which more is sold in the London market than of all others, (so popular that it is called *the Osier*.) fails entirely of giving good shoots in this country, although it grows to the size of a tree; and the celebrated *Longskin*, of Nottinghamshire is no better. The *Belford* or *Dishley* Willow (*S. Russelliana*) and the *Huntington* branch very much, and are quite inferior.

Thus from the failure of the most esteemed varieties of Europe, in consequence of non-adaptation to our climate, a great discouragement arose at the commencement of Willow culture in this country, which has been in operation from the time it was undertaken at the suggestion of the elder PRINCE to the present day. But that obstacle has been removed, as well as others of scarcely inferior magnitude; and the way to success has become obvious and easy, and the knowledge necessary to secure it as easily acquired as that of any other culture. A few years since a friend of mine found himself surrounded by circumstances which rendered it very desirable that he should cultivate Willow successfully. He diligently set about a thorough investigation of the subject, determined to bring into his service all available elements of success. In furtherance of this object (chiefly through my agency) he imported every



variety of Willow of any note cultivated in Europe, and conducted a suite of experiments with them, in different localities and on various soils. Their economic characters for our climate have been ascertained, and the result is, that among many of considerable value, *three* have been found of such general and particular excellence as to rank them above all others — with one remarkable exception soon to be named.

1st. FORBES' WILLOW — *Salix Forbyana*.—Hardy and productive, its rods having almost a leathery toughness; but it does not whiten well, and in consequence its usefulness is greatly abridged. For work where unpeeled rods are used, it is most excellent.

2d. LONG-LEAVED TRIANDROUS WILLOW — *S. triandra*.—This whitens beautifully, is very tough and pliable, and grows vigorously with less drainage than any other of good quality. If the soil is very deep, it will grow with almost equal vigor where the ground is very dry; and in addition it has the excellent habit of early ripening the extremities of its shoots, on which account it is quite hardy in high northern latitudes. With our German basket-makers it is a general favorite, particularly for split work. As an ornamental tree it is also deserving of attention.

3d. PURPLE WILLOW — *S. purpurea*.—This is the representative of a large class, and appears to be far more valuable for osiers in America than in England, where it is represented as giving shoots of from three to five feet in length. I have standing by me a bundle of its shoots, from cuttings planted last spring, that average more than six feet; and another bundle, from established plants, of nearly ten feet. They were grown with good but not extraordinary culture, and any good field may easily do as well. It is much more fastidious in its habitat than either of the preceding — delights in richness, depth, and moisture, but does not tolerate excess of wetness. When well established, it has but one superior in productiveness, and may easily be made to yield four tons per acre of the most excellent rods, particularly for fine whole work, for which it has no superior. For live fences it is very valuable, and in England is "extensively used for fences for the exclusion of hares and rabbits, as well as cattle, the bark and leaves being so intensely bitter that they will touch neither, while the shoots, being long, tough, and flexible, may be formed into any shape; and a fence of this kind is reckoned little if at all inferior to that made of wire, which, when made close enough to exclude small animals and strong enough to form a barrier against large ones, is very expensive."\*

The subject of Willow for fences is so extensive and important, that I shall leave that for an entire article, remarking, by the way, that on the great western prairies it will soon be found to be invaluable, not only for fences, but for shelter from the sweeping winds. A screen of twenty-five feet in height may be grown from Willow cuttings in five years, and at a slightly retarded rate of annual increase until a height of sixty feet is gained; thus almost immediately affording "that shelter which is so indispensable at all seasons of the year, that there is no safety without it."†

\* English Flora.

† See very valuable article on "Shelter" in *Horticulturist*, 1853, p. 345, worth a year's subscription to any man engaged in cultivation.

*Salix caprea*, although of but little consideration as an osier, may claim attention in some other respects. It will grow vigorously in very wet situations, where other Willows will not live, and its large, showy catkins, which it produces very early and in the greatest abundance, furnish food for bees at a time when it is most needed. In Europe, where honey is an important article of produce, it is greatly prized for that purpose, and often makes the entire difference between an abundant yield and an entire failure, by saving the bees from starvation, coming as it does with the first warm weather which calls the bees from their hives, and before any other flowers appear. But in this respect *caprea* is about to be eclipsed by a new variety that by rare good fortune was, in the course of Dr. GRANT'S investigations, procured from England, which proves to be a great acquisition, not only in the arts, but as an ornamental tree. It is perfectly adapted to the climate of the United States, and is much more vigorous and productive than any other variety known. Cuttings of the size of a pipe-stem, six inches long, planted last April, made during the season shoots eleven feet long. Its rods are very slender, comparatively, and vary less in size "from butt to tip" than any other with which I am acquainted. "In early spring, before other flowers appear, excepting the *Magnolia conspicua* and *Cydonia Japonica*, this tree is a mass of dazzling bloom, its immense catkins exhibiting all the brightest hues of the rainbow." The remarkable vigor of this Willow, together with its hardiness and beauty, constitute it the best material for live fences that has yet been discovered, where the soil is suited to its growth; for example, on the deep, rich soil of the western prairies, and on the bottoms where fences are liable to be swept off by freshets. It will thrive in any soil that is *deep and rich*, and for a garden enclosure I can not conceive any thing more attractively beautiful than a hedge of this Willow. After the gloom of winter has passed, it affords the first cheerfully inviting scene of spring — its gorgeous flowers, covered with bees, filling the air with the joyous murmuring of their music; and its dense, rich foliage, is the last to yield to the saddening influence of early winter. The cultivation of this Willow for hoops may perhaps be worth attention. It will yield once in two years about 40,000 poles to the acre. One whose judgment is worthy of all confidence, writing from England, says that "as an osier it is better than all other varieties," and the experience of the past two years proves it of equal excellence here.

The Willows, according to the system of LINNÆUS, belong to the class Diœcia; and when grown for ornament, male, or staminate plants, should be chosen, for those only have beautiful catkins. But the beauty of Willow does not generally depend chiefly upon its inflorescence; it has a most attractive loveliness all its own, on which I shall delight to dwell when I prepare for the *Horticulturist* an article on *Salietums*. It is said by eminent botanists, and Dr. WALKER among them, that the female of most varieties is of more vigorous growth, larger size, and greater toughness than the male; and consequently, when cultivated for economical purposes, the female should be chosen. I have not found this opinion sustained by facts in this country, but rather the contrary; and the authority of Sir J. E. SMITH supports the latter opinion.

The stamens of Willow are too variable in number to admit of scientific classification by them, and the protean appearances assumed by the plants during the differ-

ent stages of their growth, as well as the still greater and more permanent changes produced by locality and cultivation, make this family of plants so difficult of discrimination, that although many acute minds have made them their earnest study for more than thirty years, the subject is still involved in considerable confusion; and cultivators, acting under widely differing circumstances, have, to those who do not sufficiently note the diversity, involved the practical management of them in something of the same apparent obscurity. But this arises from such an imperfect view of the matter as those who cultivate the earth have no right to take. A cultivator is a jury of one, with the experience of ages for his common law, taking into careful consideration *all* the circumstances of the case. If we consider the bleak latitude of Scotland, we shall see why SANG and SHIRREFF strenuously insist upon shelter as one of the circumstances indispensable to success. When we look upon England, and regard her "atmosphere of wetness," retentive soil, and the value of land commanding a yearly rent sufficient for its absolute purchase here, we can easily understand why land that is worthless for other purposes is appropriated to the growth of osiers, and also the cause for the expensive system of "laying up into beds." But the extent to which it is grown in England demands an effort of credulity to believe, and that for their own use only—not exporting any. In the extensive fenny districts which abound in several of the counties of England, Willow has served to render ground otherwise worthless of considerable and often of great value; but it is on the many fertile islands or the Thames, that are often entirely devoted to it, and on the deep, rich bottoms that form the borders of the rivers, and are occasionally overflowed by them, that the brightest results are seen—such as make the rich man richer, but are beyond the reach of the poor. The liability to failure of the Willow is less than of any other crop, when planted on such ground as the above.

If I were writing a book instead of a brief essay on the subject, it would be interesting to glance at the history of Willow culture in England, that we might see in what estimation it is held by the people best calculated to appreciate it. Its extensive introduction is of but recent date; for until the wars at the close of the last century cut off the supply JOHN BULL was content to receive his "wicker material and hoops" from the "Dutch boors," and probably would have continued so to the present time, had not necessity turned his attention to the production of it at home. But when it was once undertaken, it was prosecuted with his characteristic energy, as may be seen by reference to the agricultural and horticultural writers of the time, and to the transactions of the various societies. Prize essays were written, and gold medals awarded for the establishment of Willow plantations. Both nature's noblemen and those that "kings have made" earnestly engaged in the work. The doings of "His Grace the Duke of Bedford" alone are embodied in a princely volume, and confer honor upon his title. But after all, the result is best seen by the vast amount of land occupied as osier holts all over the kingdom; and from its history during the past fifty years in England, may perhaps be inferred the best answer to the frequent question, "Will not the business be soon overdone?" In Britain and on the continent, with the exception of an occasional fluctuation, prices have changed but little, and not at all



declined; but in the best fields, and under improved culture, the profits have increased. In the year 1812 the nett profit of some good plantations was stated at £30 to £40 per acre; and in 1852, some as high as £50 per acre. On those plantations where the ground was "fit for nothing else" even under good management, the profit was often as low as £10 per acre; and the writer sensibly remarks that "the judicious expenditure for great care in the cultivation of any crop is generally profitable, but in none more so than in the cultivation of Willow, often yielding a profit of 300 or 400 per cent."—*Sang, G. K.*

I have drawn my illustrations extensively from English culture, because there "the thing is systematically done up." The best and most cultivated minds have given it their long-continued and careful attention; and in such hands there is no difficulty or uncertainty in observing the connection between cause and effect—for on this the value of observation chiefly depends. The aim of cultivation is in every case the same—to surround the plant, in the most economical manner, with all the circumstances favorable to the development of those qualities for which it is grown; and in cultivation, as well as choice of plants, some regard must be had to difference of climate as well as of other peculiar circumstances, of which I shall presently speak. The statistics of American culture, which I have opportunity of knowing, show a remarkable coincidence with the European, but the price is considerably in favor of the American cultivator.

The number of cuttings required for an acre differ widely, according to the end to be accomplished, ranging from ten to thirty thousand; and at the end of five or six years the plantations may be of about equal value planted with the number of either extreme. For large plantations, the best number is probably twelve to fifteen thousand, and not much crop looked for until the end of the second season, and some even prefer to take no crop for market until the end of the third season, when one of great value may be had. In such case, twelve thousand would be the proper number. A crop of considerable value may be had the second season; and for this purpose perhaps fifteen thousand would be chosen. These would be set in rows about three feet apart, and about ten inches distant in the rows. To derive the most pleasure and profit immediate and prospective, from one acre, the plan adopted on the islands of the Thames, or on the borders of the Cam and Trent, would be the one to pursue. The rows should be eighteen inches apart, and the plants ten inches apart in the rows. If the ground is well prepared, and the culture such as it should be, a very beautiful crop may be had, of considerable value, the first year. A small holt of this description I have in my mind's eye as I write, and rods from it are standing by me, giving an average length that would be considered respectable for a well-established field. For this purpose not more than two shoots must be suffered to grow from a set the first season. At the end of the sixth year, alternate stools are to be dug up, leaving the rows eighteen inches apart, and the stools twenty inches distant in the rows. In favorable situations, and where cuttings may be had at very cheap rates, this is undoubtedly the most advantageous mode, and at once makes a field that the eye delights to rest upon.

The cuttings should be prepared in fall or early winter ; and if planted in the fall, the ends will form the callosity preparatory to sending out roots. But this advantage is generally more than counterbalanced by their liability to be thrown out by frost, so that spring planting is on the whole to be recommended.

In setting, a small portion only should remain above ground ; and the depth to which they should be inserted depends much upon the character of the soil—a light, pervious soil receiving with advantage to a depth that in a very retentive soil would be disadvantageous. The most vigorous growth will be obtained when the strongest roots start from the lower end of the set ; and setting so deep that the end does not vegetate, causes a degree of inactivity through the whole plant.

It should be remarked, by the way, that cuttings of vigorous upland growth, that have had an abundance of room, make more vigorous and healthy plantations than those taken from osier holts ; and that the wood of one year's growth, with a portion of two year's wood for the lower extremity, make the best of all.

The length of cuttings may vary from seven to fourteen inches for osiers ; but for fencing purposes, from eight inches to as many feet, according to the plan adopted.

For growing Willow profitably, the ground should be well chosen, and partially in reference to the varieties to be cultivated—constant requisites being depth of soil, richness, and moisture, but absence of stagnant water. The ground should also be level, or nearly so, and free from obstructions, for convenient tillage. Heavy, retentive soils, deeply worked, even if elevated in situation, are excellent. Deep, rich bottoms, that are overflowed in winter and spring, and occasionally in summer, are very advantageously used for the purpose. On deep, alluvial soil, freed from standing water, but yet so soft that plowing is impracticable, will give enormous crops of *triandra*, requiring no tillage but keeping the weeds down ; but on such *purpurea* will not thrive, nor scarcely grow. There are large districts of deep alluvium, often inclining to swamp, in which Soft Maple delights, which, so much drained as to do away with its swampy character, and with no other preparation than removing the trees, may make excellent plantations. The sprouts from the stumps for two years would cause some annoyance, but the stumps themselves would cause but little disadvantage, except by their unsightly appearance, and would rather favor the growth of the Willow. The deep prairies of the west leave nothing to be desired except a sheltering belt of trees, which the Willow can soon furnish. “Natural meadow,” composed of a mixture of vegetable and earthy matter, not so adhesive as to be of difficult tillage—such as in *very* favorable seasons might even give a rampant crop of Corn, but it would oftener fail and be given to Buckwheat—with a stream running through, by which it might occasionally be overflowed, would be my ideal of an osier field.

After a few years the Willow so overshadows the ground that the labor of tillage becomes very small. Ground that is not overflowed at any time, should have a little stable manure before planting, (be deeply worked of course,) and at long intervals of four or five years afterwards, or the complaint will be made of deterioration ; whereas, if the ground is constantly kept clean, and occasionally enriched, the plantation will increase in productiveness for many years, and afford to the cultivator an amount of

pleasure and profit not to be sought for, unless in the orchard or vineyard, on which time and capital have been largely expended.

The importance of Willow to man has been recognized throughout Europe, from the earliest ages. Among the Romans, as early as the time of Cato, a crop of Willow was considered so valuable that he ranks the *salictum* (or Willow field) next in importance to the vineyard. And in modern times, Sir I. W. HOOKER observes, "The many important uses rendered to man by the different species of Willow, serve to rank them among the first in the list of our economical plants." Now what I have attempted to indicate by the foregoing hints, is that the Willow plantation is capable of producing great results; but only when managed with the care that is the offspring of knowledge: and that the proper selection of varieties at the outset is all important. As is the management of the *salictum* or vineyards, so are the profits—*minus*, *plus*, or *plurimus*.

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## A CHAPTER ON GARDENERS.

BY HORTICOLA.

NURSERYMEN and florists are frequently called gardeners, but in the present case I wish to be understood as meaning *gentlemen's gardeners*. To begin at the beginning, I will first inquire what a gardener is. In scientific phraseology, he belongs to the genus *Homo* and to the natural order of Menials. If you doubt my assertion, or wish for higher authority as to the correctness of my classification, I refer you to any of the New York papers, where, if you will run your eye down the columns, you will find—

"WANTED—Three cooks, one housemaid, two waiters, four coachmen, two *gardeners*, and a servant of all work."

As the gardener belongs to this family, he is treated by his employer in the same manner as the rest. "And why not?" some of my readers may ask. Who or what is the gardener, that he should be distinguished or held in higher esteem than the rest? I do not wish to reflect, sneer, or in any way speak or write disparagingly of these necessary and useful worthies; they may discharge their various duties with credit to themselves and to the satisfaction of their employers: but the requirements of the gardener I conceive to be of a different and more important character than of the others. He must be a man of mind, capable of thought, foresight, and reflection. He has not only the same amount of manual labor to perform as the other domestics, but his mental powers must be taxed—he must work with head and hands too, or he is no gardener. He is required, perhaps, to produce bunches of well-ripened Grapes in May or June, while the waiter has merely to dish them and carry them to the table: and in the same months, Cauliflowers, Cucumbers, and new Potatoes; while the disciple of Mrs. GLASSE has merely to cook and serve them up. Poor blue-apron has first to "*catch the hare*," which is certainly the most difficult part of the business.

I will next inquire why it is that a gardener is treated like a mere machine,



which in many situations he is. Is the fault his own, or does the blame attach to his employer? I am inclined to think that in very many cases blame ought to rest on his own shoulders. I admit that many good gardeners frequently become careless and indifferent from the fact that their services and ability are not properly appreciated by their masters; but I think one reason why he makes no distinction between the gardener and the other servants, is because he actually can not see any difference, either in address, intellectual acquirements, or anything else. It is to this I would particularly wish to call the attention of the gardener. There is truth in the adage, that "if we wish to command respect from others, we must first learn to respect ourselves;" and I should infer, from the personal appearance of some gardeners, that they have entirely lost all self-respect. It may appear a small affair to some to allude to the subject; but, while I abominate all coxcombry and dandyism, at the same time I do not see why a gardener should not be clean in person and decent in apparel. It is too delicate an affair for an employer to allude to; but I feel assured that many men would hold a higher place in the esteem of their employers, if they paid a little more attention to this.

A gardener ought to be intelligent, and well informed about every thing appertaining to his business. There are many who are well posted up in politics, the price of lots, &c., and who do not know the names even of half the plants under their care, saying nothing of their native habitats, introduction into the country, &c. Others again have I met with (despisers of books, catalogues, &c.,) relying on their own unaided practice, as they say, for their knowledge, who have affirmed that they could tell whether a plant was hardy or tender, by its appearance. I should like to hear the verdict of one of these knowing physiologists on two such plants as *Auracaria excelsa* and *Libocedrus Chiliensis*, supposing they had never seen them before.

As regards information from books and practice, the latter I admit is the most important; but at the present day, the gardener who never reads, whatever he may think to the contrary, is most certainly behind the age in which he lives. I know that the majority of gardeners have received only the rudiments of an education; neither have some of the greatest men of the past and present ages—they have been self-taught. What education did Sir JOSEPH PAXTON receive? and now look at the position he holds. Some jealous minds may sneer, and say that had it not been for the patronage of his princely employer he would have been nothing more than any ordinary gardener. I do not believe it; recollect there is no royal road to learning. Doubtless he met with every encouragement, but his success must be mainly attributed to his untiring industry and perseverance. Although I am not personally acquainted with Sir JOSEPH, I think I have sufficient acquaintance with such a man to warrant the assertion that (if called upon to do it) he would cast his title at her Majesty's feet, and his property after it, rather than sacrifice or be robbed of the knowledge he possesses—the information he has obtained from books, observation, men, practice, &c. Such is the value of knowledge. Of course, in this country a gardener does not expect to receive the honor of Knighthood, but if he will, "a man can be a man for a' that." I do not know of any trade, business, or pro-

fession, which presents more seductive allurements for the acquisition of knowledge, than that of a gardener. There is hardly a tree, plant, or shrub, which he has under his care, but has some beautiful association. Why even the name is suggestive—it reminds us of some eminent person, place, or event. Take one or two plants for illustration—*Gardenia Fortunei*, *Abies Douglasii*, *Tropaeolum Lobbianum*, *Acacia Drummondii*. Who are these individuals whose appellations these plants assume; are they alive, or dead; and where did they travel? Some are no more; but the majority are alive, and still actively engaged in the field of operations. The first traveled in China, and has introduced during the past eight years some of the most beautiful plants that ever graced shrubbery or parterre; the second in Oregon, California, &c., and met with an untimely fate; the third in Chili, the Andes, and Patagonia; the last in Australia. If geography was not taught at the school our supposed inquirer attended when a boy, he will of course have but a vague idea of the exact longitude and latitude of the above-mentioned localities. If this is the case, he can borrow, or for a few shillings buy, a good geography, with maps. A few hours each evening for a week, with this before him, and he will become familiar with the above places—not only with the localities, but with the climate, products, natural history, commerce, political institutions, &c. I feel confident that many gentlemen would tender freely the use of their library to the gardener, if he only manifested a desire to avail himself of its benefits. Some of my gardener readers may smile, perhaps, and shake their heads, saying, “You don’t catch my boss lending me books to waste his time with.” I would say to such “bosses,” if such there *are*, that they mistake their own interests. At any rate, I consider that an illiterate, coarse, vulgar man, is an evil on a place, especially where there are children; and such a course of reading that I would recommend, would not, as some may suppose, make him lazy, effeminate, or too sentimental.

We all know how susceptible and plastic the minds of the young are—more inclined to imbibe evil than good. Then children must be frequently out of doors, and in the garden; and they will soon learn, and make use of, all the vulgar slang they may hear from the gardener, or the other men. How necessary, then, it is that he should be a man of good address, moral and exemplary in his character, eschewing everything in the shape of vulgarity that would tend to contaminate or vitiate their taste. Let him converse with them about the plants and flowers, pointing out any remarkable characteristics or peculiarities they may possess; or bring them a nosegay from the woods, the genuine denizens of the place, tell them their names, and the meaning or etymology of these names. By these means he may possibly implant a taste for the study of botany—an accomplishment which it is to be regretted so few young ladies in this country attach to their catalogue of studies. Services and attentions of this kind rendered to the children, would not, I think, in all cases pass unnoticed by the parents.

The education and qualifications of gardeners ought to claim more attention at the present time than it does. Look at the numerous dwellings—country seats—that are springing up like magic in every direction, many of them first class houses, and

grounds corresponding in extent. The best talent the country affords is secured for the building—nay, even Europe perhaps is ransacked for a suitable design; but the garden and grounds—who is to be the architect of these? Alas! too frequently a person called a gardener, who receives for his services \$25 per month, with a shanty to live in, and what few refuse vegetables he can pick up after the family is supplied; while perhaps the architect of the building is receiving eight or ten times that amount for the same space of time: and what is the result? Just what ought to be anticipated—the place in all probability divested of its primitive and natural beauty—fine old trees, which stood just in the proper places, cut down, elevations levelled, and other errors perpetrated; all which might have been avoided by the exercise of a little good taste and judgment, which might have been purchased for a few more dollars.

A good gardener, if he aims at landscape gardening, ought to possess the feelings of a poet, and the eye and taste of a good landscape painter. Some of my readers may think that I am now going too far. I do not expect a gardener to be a poet or a painter; but how can a person totally devoid of the above desiderata make a tasteful and judicious disposition of the place—the trees, knolls, dells, glens, shrubs, flowers, &c., so that they blend, contrast, harmonize, and afford for contemplation the greatest amount of pleasure the place is capable of. How can this, I say, be successfully accomplished by a man of uncultivated mind, who is incapable of being impressed by the beautiful in nature and art? Why I have seen some gardeners pass and repass (*without even noticing them*) magnificent specimens of trees, &c., while the same objects would have struck others speechless with admiration. There are many gardeners who partake too much of the Wall street mania, viz., too much absorbed in dollars and cents, to the exclusion of much else which is equally valuable and important; they allow themselves barely enough food to satisfy the demands of nature, and only raiment sufficient to keep them from a state of nudity. Now it is highly commendable in any man, especially a gardener, who is seldom overpaid, to be prudent provident, careful, and even rigidly economical in his expenditures; but when this is allowed to merge into meanness and parsimony, it contracts the soul, and mars and deforms his better nature. Such men can not see beauty or utility in anything unless real profit issues from it in the shape of dollars and cents. A gardener of this character can not afford to take a horticultural magazine, attend an exhibition, or go a few miles to see a fellow gardener or a nursery. "*Cui bono*," says he, "it wont pay." I would ask such a one, what pay or profit the naturalist, the botanist—the real lover of plants—expects, when he travels on foot long miles on hot, summer days, to seek his favorites in their native haunts? Ask one of these devotees, and he will tell you that the smiles of such little gems as *Hepatica*, *Viola*, *Claytonia*, *Saxifraga*, &c., after a long and dreary winter, afford him as much real pleasure as the welcoming of a loved brother, sister, or any other dear friend, after a twelve-month's absence. But the individual who makes the dollar his idol, is dead to such impressions.

It may be thought by some of my readers that I have been too severe on the gardener, in the foregoing remarks: but it must not be supposed that I class all garden-



ers alike—no, there are not a few who are a credit to themselves and an ornament to their profession; it is to the laggard, the self-sufficient, the drone, the sloven, that I would address myself. 'Tis these, often, who bring obloquy on the rest—one bad gardener will often be the means of bringing disgrace on the fraternity. Rouse up, then, brothers—for I am one of you, (bad or good I do not say,) my interests are identified with yours,—let us see if we can not raise ourselves a little in the social scale. I know one thing, and that is, if we are not the meanest men, we are the meanest paid men of any class in the country, considering what is required of us. But let us examine, and satisfy ourselves that this short pay is not the result of our own short-comings; let those who employ us see that we have *mind and intellect*, as well as bone and muscle. Till they perceive this, they will not consent to place us in any other class than the one we are arranged in at the commencement of this chapter.

## ON THE CULTIVATION OF THE TUBEROSE.

BY H. W. TERRY, HARTFORD, CONN.

DESERVEDLY a favorite as this flower is, it is seldom successfully cultivated in the north, both from want of proper care and from the shortness of our season of warmth. I have been very successful in flowering it, having had at one time ninety-six spikes in one bed, early in September. As some of your readers may be willing to take the same trouble for the sake of such a splendid show, I will describe the plan I pursued.

About the 15th of April the bed should be laid out, four feet wide. This will give room for six bulbs in the cross row, at eight inches apart. The rows should be twelve inches from each other, and the bed made long enough to receive the required number of bulbs. Dig out all the earth to the depth of two feet, keeping the sides perpendicular. Be certain that the bottom is well drained, so that no water can stand in it. Fill the bed with hot dung, or, what is better, dung and leaves mixed, treading it down until within four inches of the surface. On this put eight inches of a compost of one-third good garden loam, one-third coarse sand, one-sixth rotted hot-bed manure, and one-sixth leaf mold. The bulbs should be large, plump, and entirely stripped of offsets. Make the holes four inches deep, and put a little white sand in each, so that the top of the bulb shall be an inch below the surface of the bed, and cover them, making the bed smooth. Place on the bed crosswise about four inches of straw, with poles laid lengthwise to secure it against wind. In about a fortnight examine the bed, and when the bulbs have started about two inches, take off the straw and put down some crotches at the sides of the bed to support cross poles on which to place a covering of mats or old carpets at about six inches from the surface of the bed. Remove this every mild day, putting it on at night, until all danger of frost is past. Then place slender sticks, painted green, to each bulb, to tie the flower-stems to. Water plentifully in dry weather.

## Foreign Notices.

SPRING FLOWERS IN THE NORTH OF CHINA.—In the north of China there are a number of plants which have their flower-buds very prominently developed in autumn, so much so that they are ready to burst into bloom before the winter has quite passed by, or, at all events, on the first dawn of spring. Among these *Jasminum multiflorum* occupies a prominent position. Its yellow blossoms, which it produces in great abundance, may be seen not unfrequently peeping out from among the snow, and reminds the stranger in these remote regions of the beautiful Primroses and Cowslips which grow on the shaded banks of his own land. Nearly as early as this, the pretty daisy-like *Spiraea prunifolia*, the yellow *Forsythia viridissima*, the lilac *Daphne Fortunei*, and the pink Judas tree, become covered with blossoms, and make our northern Chinese gardens extremely gay. There are also some good Camellias which flower at this time, but they are generally grown in pots under such shelter as mat sheds and other buildings of a like kind can afford. The double-blossomed Peach, of which there are three very distinct varieties now in England, are perhaps the gayest of all things which flower in early spring. Fancy, if you can, trees fully as large as our Almond, literally loaded with rich colored blossoms, nearly as large and double as Roses, and you will have some idea of the effect produced by these fine trees in this part of the world. On the southwest side of Shanghai there are numerous Peach gardens studded over the country. These are well worth a visit in the month of April, as the trees are then in full bloom, and have a charming effect upon the landscape. It is in this part of the country where the celebrated Shanghai Peach is largely cultivated. On the graves, which are here scattered over all the fields, and appear like huge mounds of earth, I observed many pretty Violets in flower, both white and purple, but all nearly scentless. A little later in the season, that is from the 20th of April to the beginning of May, another race of flowering shrubs and herbaceous plants succeed those I have already named. The most conspicuous among them are *Viburnum macrocephalum* and *dilatatum*, with their large heads of snow-white flowers; *Spiraea Reesiana*, and the double variety, which is more beautiful than the original species; *Wigela rosea*, now well known in Europe; Moutans of various hues of color; Azaleas, particularly the lovely little "*Amara*;" *Kerria Japonica*, the lilac and white Glycines, Roses, *Dielytra spectabilis*, and *Prinula cortusoides*. It will easily be believed that with such a host of Flora's beauties these Chinese gardens must be gay indeed. But perhaps the most beautiful sight of all is the *Glycine sinensis*, climbing upon and hanging down from other trees. I believe I noticed in my former "Notes" the fine effects produced by this climber when in such situations. I have again observed numerous examples this spring, and can not help drawing attention once more to the subject. The fine plant of this species upon the Chiswick garden wall is much and justly admired, but if you will imagine a plant equally large, or in some instances much larger, attaching itself to a tree, or even a group of trees, entwining itself round the stems, running up every branch, and weighing down every branchlet; and, in the end of April or beginning of May, covered with flowers; some faint idea may be formed of the fine effects produced by the Glycine in its native country. I believe it would not succeed if managed in this way near London, or anywhere in the north; but the experiment would be worth a trial in some parts of Europe, where the summers are warmer than they are in England. As I know you have many readers in the United States of America who are as fond of their parks and gardens as we are of ours, and I can not do better than recommend the experiment to them. Many of our northern Chinese plants succeed admirably in America. China and America are both situated on the eastern side of large continents, they are equally liable to extremes of heat and cold, and consequently the shrubs and trees of one country are almost certain to succeed as well in the other, provided they are reared in the same latitudes, and grown in the same kind of soil.—R. F., in *Gard. Chron.*

USE OF COLLODION IN PROPAGATING PLANTS. — We breathe an atmosphere of marvels. A few years since the world was astonished by the announcement that so harmless a substance as cotton wool could be made to serve the purposes of gunpowder; and gun cotton was patented for the purpose. Shortly afterwards an ingenious apothecary discovered that gun cotton could be employed to heal the wound it caused, a substance called collodion, the prince of plasters, having been made by dissolving this sort of cotton in ether. And now it appears as if collodion itself were likely to become a new arm in gardening.

Collodion is not merely adhesive, but impenetrable by water, and impervious to air. Taking advantage of these properties, it occurred to Mr. Low that in the nice act of propagating plants, this substance might be advantageously employed. It would be unjust to this gentleman if we did not give his statement, as officially made public in the *Proceedings of the Royal Society*, before whom a paper on the subject has been lately read.

It had occurred to him, that if a cutting of a plant were sealed at the base, so as to exclude the moisture of the soil from ascending the stem in injurious quantities, the method of striking cuttings of most species of plants would not be so precarious a process as at present; and accordingly some collodion was obtained in order to make the experiment.

With respect to this new process, he states, that immediately upon the cutting being severed from the parent stem, the collodion was applied to the wound, and then left a few seconds to dry, after which the cuttings were potted in the ordinary manner.

To test the value of this new process more effectually, duplicates of all the species experimented upon were at the same time similarly planted, without the collodion being applied to them.

Experiments were carried on in two different ways; one batch of cuttings being placed on a hot-bed, while a second batch was planted in the open ground, without even the protection of glass.

*First Batch.*—All of which were placed on a hot-bed on the 1st of September, and examined on the 1st of October:

## STOVE PLANTS.

Name of Plant.	Number of Cuttings with Collodion applied.	Number of Cuttings which took root.	Number of Cuttings without the application of Collodion.	Number of Cuttings which took root.
<i>Ixora coccinea</i> , . . . . .	1	1	1	0
<i>Tussockia miniata</i> , . . . . .	1	1	1	1
<i>Fraxinea Hoppena</i> , . . . . .	3	3	3	0
" <i>Pohlana</i> , . . . . .	3	3	3	0
<i>Gloxinia Maria Van Houtte</i> , . . . . .	2	0	2	1
<i>Begonia incarnata</i> , . . . . .	2	2	2	1
<i>Achimenes patens</i> , . . . . .	3	7	3	6
<i>Hoya bella</i> , . . . . .	2	2	2	1
<i>Rondeletia speciosa</i> , . . . . .	2	2	2	1
<i>Allamanda nerifolia</i> , . . . . .	2	2	2	1

## GREENHOUSE PLANTS.

Name of Plant.	Number of Cuttings with Collodion applied.	Number of Cuttings which took root.	Number of Cuttings without the application of Collodion.	Number of Cuttings which took root.
<i>Boronia serrulata</i> , . . . . .	6	5	6	0
<i>Polygala Dalmaisiana</i> , . . . . .	3	1	3	0
" <i>grandiflora</i> , . . . . .	6	3	6	2
<i>Verbena luna</i> , . . . . .	6	6	6	6
<i>Chorozema cordata</i> , . . . . .	1	1	1	0
<i>Epacris pallida</i> , . . . . .	1	0	1	0
<i>Leschenaaultia formosa</i> , . . . . .	2	2	2	1
<i>Swainsonia astragalifolia</i> , . . . . .	1	1	1	0
" <i>galegifolia</i> , . . . . .	1	0	1	0
<i>Abelia rupestris</i> , . . . . .	2	2	2	0
<i>Plectranthus concolor picta</i> , . . . . .	4	2	4	2



*Second Batch.*—Planted in the open ground on the 1st of September, and examined on the 1st of October:

## HARDY PLANTS.

Name of Plant.	Number of Cuttings with Collodion applied.	Number of Cuttings which took root.	Number of Cuttings without the application of Collodion.	Number of Cuttings which took root.
<i>Garrya elliptica</i> , .....	12	5	12	1
<i>Erica vagans</i> , .....	12	7	12	4
<i>Bupleurum longifolium</i> , .....	18	6	18	0
<i>Laurus foetens</i> , .....	12	10	12	7
Rose, <i>Souvenir de la Malmaison</i> .....	6	4	6	3
<i>Taxus baccata</i> , golden-leaved variety, .....	12	8	12	4

	Total Number of Cuttings to which Collodion was applied.	Number of Cuttings which took root.	Total No. of Cuttings without the application of Collodion.	Number of Cuttings which took root.
First batch, .....	59	46	59	23
Second batch, .....	72	40	72	19

The experiment, the author considers, speaks for itself. Notwithstanding the season being too far advanced for the full benefit of the process to be thoroughly observed, still twice as many cuttings took root treated by the new method as had rooted by the old. The mortality in the open ground was increased by slugs having eaten off above the soil some of the cuttings. Those thus damaged were examined after they had been in the ground a month, and it was found that the collodion was quite as sound as when first applied. It would therefore appear that the collodion seals the wound of the cutting, and protects it from the fatal effects of damp, until roots are prepared to force through the covering of gun cotton.

It is further stated that the application of this solution has been found to be exceedingly beneficial in the pruning of such plants as *Euphorbia speciosa*, *Impatiens latifolia*, *Impatiens latifolia alba*, *Hoya bella*, *Hoya imperialis*, &c., the cut branches being prevented from bleeding.

It is the author's intention next spring to follow out this experiment, in budding and grafting, as he considers that it will also be useful in this branch of horticulture.

Gutta percha, dissolved in ether, was in some instances substituted to heal the wounds caused by pruning; yet owing to this solution not drying as rapidly as collodion, the first, and sometimes the second application was not sufficient.

The effect of these solutions upon cut flowers was very marked. Two branches were gathered as nearly alike as possible; to the flower-stalks of the one, collodion was applied. These flowers were placed in vases filled with water. Those coated over with collodion began to fade in thirty-six hours, and many were quite dead in three days; while the flowers merely placed in water in the ordinary manner remained fresh and healthy. Those that faded soonest were *Reseda odorata* and *Tropaeolum majus*, and those which were least affected were *Tagetes erecta* and *Senecio crubescens*.

Want of space prevents further notice of this curious statement at this time, but we propose to take an early opportunity of returning to it.—*Gardeners' Chronicle, London.*

**CULTURE OF THE FUCHSIA.**—This useful plant is, I fear, seldom employed now for decorating the greenhouse and conservatory, and therefore its cultivation has of late years been unfortunately much neglected; for in one place where you will find a well grown specimen, in twenty you will get them more like Broom bushes than properly managed plants. I therefore beg to offer a few remarks on the mode of culture which I pursue.

I start my early vinery about the 1st of January, at 45 deg. Fahr., and I place a few of my

best ripened Fuchsias in it, choosing the oldest of my plants for the purpose. I syringe them overhead morning and evening with tepid water, which I also apply to the vines. Under this treatment, in the course of a fortnight or so they begin to show symptoms of growth. I then raise my house to 50 deg., after which they push vigorously. I now take cuttings off all I can, and, having a bed made previously for their reception, I insert them in a compost of leaf-mold and silver sand, taking care to drain the pots well. I also put about half an inch of white sand on the top of the pot; this keeps the soil open around the neck of the cutting, and prevents damping off, which Fuchsia cuttings are apt to do at this season in mold alone. Supposing my cuttings to be struck now, I pot them off singly into 3 inch pots, in a mixture of leaf-mold, a little well-decomposed cow-dung and some sand, watering them sparingly. I then place them in a slight bottom heat, where they soon make a start, and if all goes on well they will soon be six inches high, when I shift them into a 5 inch pot in a compost of rich turfy loam, rotten cow-dung, a little leaf-mold, and sand. I now bring them to the vinery, keeping them close up to the glass. They now reap the benefit of their shift, and become strong and vigorous, throwing out laterals or side shoots in abundance. About this stage I apply a small stake, to which I tie the leader very loosely. The side shoots now make rapid progress, and when they have attained the length of two or three joints, I pinch off one, leaving one or two, according to the length of the joints. In this way I double my side shoots. I now give a little weak liquid manure, made of sheep's dung, if that can be got. I give them this twice a week, which invigorates them, and makes them push fresh laterals, which I again pinch, tying the leader to the stake as it grows. By this time the pot will be pretty well filled with roots. I now give them their final shift for the season, using a 10-inch pot, and good rough compost, consisting of turfy loam and cow-dung, in equal parts, mixed with a little leaf-mold. By the beginning of August I have got pretty tolerable plants; I therefore let them come into bloom, watering liberally with manure water, and putting a slight mulching of cow-dung on the top of the pots. They will flower till the end of October or middle of November. I now have the foundation laid for specimen plants the following season. After they have done flowering, I store them in an empty pit, giving only as much water as will keep them alive till spring. Next year they get the same treatment as last, and by these means I succeed in getting plants which are the admiration of all who see them.—*B., in Gardeners' Chronicle, Londn.*

**IMPATIENS JERDONIÆ.**—A specimen of this new, greenhouse, herbaceous plant, exhibited by Mr. VEITCH, at the last meeting of the Horticultural Society, received a Silver Knightian Medal, in testimony of its singular beauty and horticultural value. It forms a tuft of fleshy or tuberous stems, about a foot high, of a deep purple color, concealed by numerous narrow, deep-green leaves, from among the uppermost of which appear great numbers of flowers in general form like those of any other Balsam, but of a brilliant brick-red, relieved by yellow and green. The red belongs to a large, bag-shaped, curved pouch, which hangs down in front of the flower-stalk; the yellow and green, confined to the small sepals and petals, form a helmet-shaped body, which seems to terminate the pouch. The figure in the *Botanical Magazine* was taken from a very ill-colored specimen. It will no doubt propagate easily by cuttings, if not by seed, and can not fail to be a universal favorite. Mr. M'Ivor sent the tuberous stems from the Neilgherry garden, at Ootacamund, to the Royal Botanic Gardens, Kew, where it first flowered in June, 1852.—*London Gardeners' Chronicle.*



## Editor's Table.

THE SEASON.—We thought, at one time, that we were going to have a spring of unprecedented earliness. On the twelfth of March the ground was pretty generally free from frost, and outdoor operations were briskly commenced. For nearly a week the weather continued as mild and beautiful as May, when, on the eighteenth, a strong gale of wind suddenly came up, and with it intense cold, which completely froze up the ground again, and put a stop to all outdoor work. The high wind and cold continued nearly three days, trying severely green-houses and hot-beds, as well as bulbous roots and other articles that had been uncovered on the expectation of spring. We do not think that the fruit buds suffered, because the warmth had scarcely been of sufficiently long continuance to excite them, nor has the cold been so intense as to do them injury in their backward condition.

THE DOWNING MONUMENT.—We have been informed that the fund now collected for this monument amounts to about *one thousand dollars*. The design is a vase of pure white marble, on a pedestal of five feet in height, the whole to be nine feet. The vase is to be elaborately carved, and the pedestal to bear a suitable inscription. It is contemplated, we believe, to place it in some of the public grounds at Washington. If the New Yorkers had succeeded in their great central park project, that would have been the place for it, we think. We would rather place it on the Boston Common than on any of the public grounds at Washington, in their present state. They might do for the monument of a soldier, but not for that of a man of such tastes as DOWNING'S.

THE PARK QUESTION IN NEW YORK.—We are indebted to SAMUEL J. GUSTIN, Esq., of Newark, N. J., for reports, documents, and proceedings relative to the New York Parks. The question is yet, we believe, undecided. Some are in favor of "Jones' Park"—a tract of ground containing 153 acres, part of it heavily wooded, lying between the Third avenue and the East River, not a great distance from the Hurlgate ferry. "Central Park," contains upwards of 700 acres, almost in the center of the island, between Sixteenth and 106th streets and the Fifth and Eighth avenues, being about half a mile wide and two and one-fourth miles long. This ground embraces the site of the new Croton reservoir, which will be in fact a lake of nearly 100 acres area; also, the State Arsenal and St. Vincent's Academy. The ground is rocky and uneven; some portions of it being elevated, and commanding a fine view of the rivers, villages, and country, that surround the island of New York. A magnificent park *might* be made on this ground; a park every way worthy the great commercial metropolis. Jones Park is recommended as being more available at present, having woods on it that may be thinned out, and afford shade and ornament at once, and at a comparatively trifling cost. Admit this; though we have little faith in the practicability of making handsome park trees of many of those now standing on Jones' woods. A few around the outsides would do very well. But what is a park of 150 acres to New York, not as she is, but as she will be five and twenty years hence? Nothing! She will want both of these parks; and, if the people of New York could appreciate the



matter, they would demand them both. Is it not economy to provide for the public health? Most surely it is; and if no provision is now made for vacant ground, where people can enjoy fresh air and healthful exercise, what will become of them by and by, when the whole island is densely occupied? Will it be possible then for such immense masses of human beings, crowded together in the midst of filthy streets and alleys, to avoid epidemic diseases? and would not one season of cholera cost more than both the talked-of parks? No large city in the world is so destitute of public grounds as New York. We hope this will not long be so.

THE CONCORD GRAPE.—This famous new Grape is one of the leading topics of the times in the horticultural world. We find various opinions in regard to it, even among the Boston gentlemen who have seen it from its first appearance. We have, during the last few weeks, received several letters on the subject. One says: "Those who purchase the *Concord* Grape, with the expectation that it will equal in size the cut that appears in the *Magazine of Horticulture*, and other papers, or in merit the terms used in the advertisement, will be greatly disappointed. The Grape, either in bunch or berry, is not by *one-third* as large as pictured; nor is the Grape generally commended here." Another says: "The best judges have never considered it more than a Grape for preserves."

Personally, we have no knowledge of the Grape whatever, and can not say a word either for or against it. We have the opinions of very respectable gentlemen, newspaper articles, and committee reports, speaking highly of its merits; while other gentlemen, of the highest standing, say that the public should be cautioned against believing in either the extraordinary size or excellence claimed for it by its friends. Mr. BULL himself, who we believe is perfectly honest in the matter, though, like other people, liable to be carried away by a partiality for his own productions, assures us that he has entire confidence that it will prove to be all that is claimed for it; and that his own neighbors are buying it, by the half dozen, at five dollars each. Mr. B. sends us the following note, in reply to a correspondent, who expressed a doubt, in our last number, as to the *Concord* ripening *four weeks* earlier than the *Isabella*.

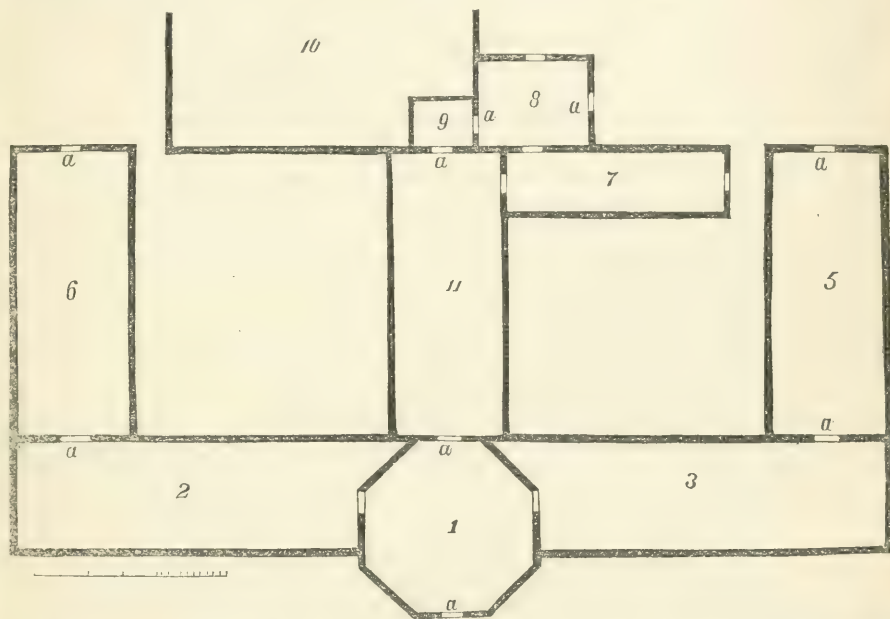
"I observe, in the March number of the *Horticulturist*, an article on the new seedling Grape *Concord*, signed JAMES LENNON, who doubts if the *Concord* does really ripen four weeks before the *Isabella*, which, he says, ripens at Rochester about the same time the new seedling does at Concord. Will you allow me a little space to state the data upon which my statement is founded? so that your correspondent, and others, may see for themselves all the circumstances of the case, and arrive at an intelligent conclusion in regard to it.

"I have had the *Isabella*, *Diana*, *Catawba*, and many other varieties, growing in my garden for many years. The *Isabella*, on the open trellis, never ripened a single bunch. Five years since, I planted it against the house, in a border prepared in the best manner. In this position it does ripen its fruit, generally; but, two years since, it failed, even there. The *Catawba*, though against the house, never ripens; the *Diana*, in the open border, ripens, with difficulty, about the first of October. It ripens on the seaboard a few days earlier. They have all of them been well cultivated, and annually pruned. The *Concord* has grown on the open ground, where it has *never failed* to give a full crop of ripe fruit by the tenth of September; while the *Isabella*, above spoken of, gave its earliest bunches of ripe fruit October sixth, and the main crop was gathered October fifteenth, not without some red berries, even then. The *Isabella* ripens at Boston about the first of October.

"Whether the same difference in the time of ripening the *Isabella* and the *Concord* will prevail at Rochester, can only be determined when the *Concord* shall have been grown there. I can not see any good reason why the *Concord* should not be as much earlier than the *Isabella* at Rochester as it is at Concord. E. W. BULL.—*Concord, Mass.*"

GREEN HOUSES OF JOHN B. EATON & CO., OAKLANDS NURSERY, BUFFALO, N. Y.—The most complete and elegant plant houses which we have seen in this country, devoted to commercial cultivation, are those of Messrs. EATON & CO., of Buffalo, formerly MASON & LOVERING. Every convenience in the way of heat, water, ventilation, &c., has been provided as perfectly as it was possible, without any regard to the expense. They are finely situated on one of the highest localities, near Buffalo, and adjoining a large and costly residence, which Mr. MASON has nearly completed for himself.

The plants are young—the houses having been completed last fall—but all are in a fine, healthy condition, and arranged with great care and taste. We were so much pleased with these houses that we requested Mr. EATON, who is the managing partner, to give us a diagram and description of them, which he has very kindly done, as follows:



1, *Conservatory*—octagon, 30 feet in diameter, occupied by a bed of prepared soil; in the center, a rockery, and shelves extending around the house next the glass. Between the shelving and border is a broad walk, paved with marble.

2, *Rose-House*—20 by 60 feet, furnished with a stage and front shelf; below the stage is an excavation, used for storing Dahlias, etc., and behind it a pit, level with the ground, in which are plants of large size; at the west end is a raised border, in which are plunged Camellias, etc.

3, *Geranium-House*—20 by 60 feet dimensions, and arrangements the same as Rose-House, except that the raised border at the end is replaced by a shelf.

5, *Forcing-House*—20 by 50 feet. Pit in center, two feet high, heated below. Shelf each side of the house.

6, *Grape-House*—20 by 50 feet; border inside, occupying the whole house; at the back it is raised, and at present filled with Camellias plunged in the soil. Grapes but recently planted, and as yet only on the front.

7, *Propagating-House*—between Hot and Forcing-Houses, 12 by 40 feet; a heated pit on each side; pathway sunk between them.

11. *Hot House*—opening from Office, 20 by 50 feet; center occupied by a walled pit two feet high, surrounded by a walk, with shelves on the sides next the glass.

8. *Office*. 9. *Entrance*. 10. *Dwelling House*. *a, a, a*, Doors. The open space on each side of Hot House is used for frames. The front is 150 feet.

The *Rose, Geranium and Grape Houses*, are constructed with "three quarter span" roofs, as in the annexed figure, and back walls of hollow brickwork. The two former have a southern, and the latter an eastern aspect. The *short span* being behind the stages, and directly over the pits in the rear of them, give an abundance of light to plants placed in them.



The *Forcing and Hot-Houses* are both span-roofed, running nearly north and south.

Roof-sashes all stationary, with ventilators placed at the ridge and below the front sashes, which also open. Partitions between houses are glass. The whole range is heated by a powerful hot-water apparatus, erected by Joseph Nason, of New York; the pipes of which are from four to six inches in diameter, and measure nearly 3,000 feet in length. They are all heated by one furnace, situated in the basement of the office building; and which is capable of warming a still greater extent of surface, if required. In the same basement is a powerful steam pump, which elevates the water for the supply of the houses, from capacious cisterns and a deep well adjacent (as hard or soft water is required), into two reservoirs, containing nearly 600 gallons each, located in the attic, whence it is conveyed in pipes to all parts of the green-houses, wherever needed; also to the stables, &c., hydrants are placed at convenient distances, to which hose may be attached, as may also be done with the steam pump, which thus becomes a fire engine of considerable power."

CONVERSATIONAL MEETINGS OF HORTICULTURAL SOCIETIES.—A gentleman connected with the New York Horticultural Society writes:

"I regard our conversational meetings as more important than our public exhibitions; indeed no Horticultural Society, in my opinion, is in the straight path of duty until it has established meetings of this kind. It is impossible for a dozen practical men to meet together, and relate their experience, without being mutually benefited; unless they should all be fools, which it would not be charitable to suppose. I would urge you to recommend the holding of such meetings in every section of the country."

We do recommend such meetings to all who are interested in horticulture. In every city and village in the land, if some active person would undertake it, a club might be formed to hold weekly meetings, during the leisure seasons at least, to interchange experience in gardening matters; and these meetings might not only be instructive and profitable, but highly entertaining. Horticulture offers such an endless variety of topics, that the "conversations" need never be wearisome, but always fresh.

NEW CAMELLIAS—AMERICAN SEEDLINGS.—We gather from the newspapers that McKENZIE'S seedling Camellia, named *Victoria*, has been sold to an English plant-grower for \$1,000. We have heard nothing of its merits. Mr. H. A. GRAVE, of Brooklyn, sent us a few days ago a plant in bloom, of a handsome new variety, *Ellen's Favorite*, (Hicks). The flower is large and well formed, of a rosy carmine color, and the plant appears to be a free grower. Mr. G. says it strikes very freely from cuttings.

In our last number, and this, several questions are unanswered, to which we invite the attention of our readers familiar with the subjects.

We have to thank several correspondents for valuable communications, which will appear soon.



WE are greatly indebted to several friends and correspondents for kindly suggestions, which we do not allow to pass unheeded. We need advice greatly, and are not ashamed to confess it.

One hints that we have ruined the *Horticulturist* with Pears; that many subscribers "are sick of Pears;" and that a certain journal East has split all to pieces on the same rock, Pears. We are alarmed, of course. In our simplicity we thought every body wanted to know something about Pears.

Another is sick of the French articles on the "Pruning and Management of the Peach," because such information is "not adapted to this country." Here, again, we were in error. We thought that even in this country, and among our subscribers, there were a few who trained Peach trees on walls and trellises; and that even if there were not, there were persons engaged in the management of Peach trees in the open air, as standards, who might derive some benefit from LEPERE's very complete account of his system of propagating, planting, pruning, training, and treating the Peach tree, under all circumstances.

The culture of the Peach in this country is, as a general thing, the very worst that can be imagined. Everywhere we see skeleton orchards staring at us over the fences, like the ghosts of trees that had died a premature death from cruel treatment. If cultivators would study the nature and habits of the tree, as LEPERE has done, and apply a mode of treatment adapted to it, they would have trees that would do them honor, instead of being a disgrace. We ask our friends who have thought it a waste of paper to reprint this article, to read it over again, and see whether it be really so uninteresting as they imagine.

We will thank our friends and readers to speak out plainly, and tell us when we err; but we beg them to be charitable, and not to forget that we have several thousand readers to provide for, and that among so many there must be some discontented.

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ERRORS CORRECTED.—We regretted to find several typographical errors in our last number, which were quite unnecessary—

"*Tropiolum*," on page 111, should be *Tropæolum*.

"*Leon le Clerc de Haral*," on page 125, should be *Leon le Clerc de Laval*.

"*Josephine de Moline*," on page 135, should be *Josephine de Maline*.

"Stove-room," on page 128, 6th line from the top, should be store-room.

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IN the February number of the *Horticulturist*, page 92, you remark that the *Virgilia lutea* is allied to the *Camellia*, and the only native tree that is so. This is surely an oversight, as *Virgilia* belongs to Leguminosæ, while *Camellia* belongs to Ternstroemiaeæ, which natural order is represented in this country by two genera, having each two species; viz., *GORDONIA Lasianthus* and *Pubescens*, *STUARTIA Virginica* and *Pentagynia*. H. W. T.—*Hartford, Ct.*

The note in last number, page 133, will explain this. It was an omission of a line. *Gordonia* was referred to and not *Virgilia*.

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I HAVE growing in a house for Grapes, a vine five years old. It has never shown any blossoms, and I think, from the appearance of the buds, that it will not this season. The vine is over an inch and three-quarters in diameter. [What kind, and how managed?—Ed.]

I would advise those about building graperies, to use stone posts. Red and Yellow Cedar decayed so much in three years, that I had the house taken down and rebuilt. Cedar posts cost me 50 cents, and stone \$1.25 each, with a hole drilled in the top end to receive an iron bolt to steady the sills. M.—*Oncida, Co.*

MR. LONGWORTH'S EXPERIMENTS WITH THE CLINTON GRAPE.—Thinking that the readers of the *Horticulturist* would like to hear what Mr. Longworth thinks of the *Clinton* Grape, I venture to transfer the following for your columns, from his letter to me of the first of February. J. H. WATTS—*Rochester, N. Y.*

"I believe I advised you that the must and wine of the *Clinton* Grape differed from any I have ever seen. The must weighs very heavy, indicating a large quantity of saccharine matter—the wine, fully fermented, acid, and weighing but little, and indicating but little spirit. Of the Grapes you sent last spring, I made two kinds of wine. One part I pressed as soon as worked, and put at the rate of seventeen ounces of sugar to the gallon of must; the other, I worked, and left to ferment in the skins, before pressing, and put no sugar. The first is of a beautiful dark-red, which I have never seen equalled in color, and very clear. It has no sweetness, and is rather dry, but of fine flavor. The other is clear, very dark-red, and more acid, but of fine flavor. I deem that in our warmer latitude, the must will have more sugar, and will make a valuable red wine—an article we have not at present. I am very desirous of giving the Grape further trial, and shall esteem it a favor if you will engage and send me from two to five bushels of the Grapes, and let them be as ripe as possible. I shall also be pleased to get from two thousand to five thousand cuttings. I will next spring graft a dozen roots with this Grape, and the next season guarantee to have Grapes enough fully to test how they suit our climate—as I have had grafts grow the first season from ten to thirty feet, and often to bear some fruit the same season."

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NOTE ON THE PROBABLE EFFECT OF SWEEPINGS OF BLACKSMITHS' SHOPS AND CHARCOAL ON FRUIT TREES, &c. &c.—I notice in the January number of the *Horticulturist*, a communication from R. B. WARREN, in which he says:

"In preparing the ground for setting them" (Pear trees), "I put into the holes a half bushel of the sweepings of a blacksmith's shop, mixed with cinders and ashes from the forge," &c. "I have two very fine trees, five years old, which have never produced half a dozen Pears; they bloom profusely every year, but set no fruit." The sweepings and cinders from a blacksmith's shop would probably have the same effect on trees as charcoal. My wife scatters pulverized charcoal over the earth around her house-plants, which causes them to bloom very profusely, and the flowers to assume much brighter colors than they usually wear.

We tried the experiment on our Cucumber vines; they blossomed a fortnight earlier than the others; in fact the vines were completely covered with flowers, but no Cucumbers were produced. I tried the same experiment on an Apple tree; it blossomed a week earlier than any other tree in the orchard, but did not bear a single Apple.

A moderate use of charcoal, or sweepings and cinders from iron workers' shops, may be beneficial to garden vegetables and fruit trees, though my experiments have not been extensive enough to satisfy me whether they may be successfully applied or not. H. L. SPENCER—*Castleton, Vt.*

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NOTE ON THE GREEN SWEETING APPLE.—What a luxury, Mr. BARRY, we have in this fresh and delicious Apple? I believe we have each tried its merits in the supply from ROBERT H. BROWN'S orchard. Possessing a very mild and agreeable sweet, and being very juicy, it gives a healthy tone to digestion, and can be eaten with impunity. I wish no other beverage than its juices to quench thirst, and no better dessert at all times. The tree produces abundantly; and my object is to call attention to it, that every cultivator of trees may be sure and have it. The Apple is in perfection now, and will keep a month longer. J. H. WATTS—*Rochester.*

We consider this the best Sweet Apple for dessert that we grow in this locality; always fair, and of a handsome pea-green color, rarely with a blush on one side. The tree is a good grower and bearer.

A CORRESPONDENT writes as follows from Lawrence county, Ohio:

"The *Rome Beauty* Apple was originated near this place, on the river bottom. It grows to an enormous size; ninety-six will fill a barrel easily. Those grown on the upland are the best flavored, and of fine size and appearance.

"There is a yellow Peach here, called the *Italian*, nearly as large as the above Apple, and of fine flavor. It was raised from a stone brought from Italy.

"With the exception of the above named fruits, there is but little in this country worthy the name of fruit.

"I asked a man what kind of Grape vine that was in his garden? He said, *Tame Grape*—tame enough, indeed—on the ground. What kind of Gooseberry is that? *Tame*. What kind of Plum is that? *English*."

PEARS.—As some of your subscribers have sent in an account of the keeping of their Pears, I would inform you, though I have but few, that I ate my last *Beurre Diel* the first week in January; and yesterday (February 27) my last *Beurre d' Aremberg*. My *Easter Beurre* will, I think, keep till next May, as I have kept them that long heretofore. JACOB FRANTZ—*Paradise, Pa.*

TO THE VICTIM OF HAPPY CONTENTMENT.\*—*Dear Atticus*—And you are too contented in a home where beauty and taste are so perfected as to leave little room for devising and improving? I do not wonder; for are we not all happiest when intellect and heart are taxed to their utmost in inventing, and the physical system correspondingly so in executing darling plans and theories? "We were not made to wander on the wing." 'Tis in creating that we live most intensely. That were a sordid soul—a dull, phlegmatic creature, devoid the actuations of genius and talent—who could rest quietly in his perfected home, and bask in the sunshine of its beauty—revel sensually in the adornments clustered about him. He would be a voluptuous animal, despite his prating of art and taste.

Your state, sir, is a dangerous, a critical one. Your disease has more fearful tendencies, I fear, than you realize. Look well to yourself before it advances beyond your control. I have had great faith in Mr. BARRY's judgment: but the best of people err sometimes. As you value your well-being, I pray you do not hug to yourself the vain thought that the "*summum bonum* of happiness and contentment you have reached!" Lay not the flattering sweet unction to your soul! That was a siren song that breathed through the editorial quill just then; heed it not! or it will lull you into a dangerous slumber, from which you will awaken to an incurable sense of unrest and discontent. My womanly nature is stirred for you; I tremble lest you may yield to delusive charms, and I long to snatch you from ruin's brink.

Your confessions and your aspirations after knowledge to show you your true state has interested me, though I know you not from any other Greek. But I claim you as a brother. With such a mind and its capacities for conceiving and constructing—for weaving bright dreams into brighter realities—you will not be satisfied even when all within your reach seems attained. You must still be creating new fancies, and laboring to endow with form those imaginings. You can never become a quiet, contented clod.

Like a good friend, I do as I would be done by, and bring you proposals of relief. First, pray, sir, allow me to be a little egotistical, and tell you somewhat of myself.

Most of my life was spent in a great city, amid its high walls, its crowded streets, and ceaseless din; but I was ever longing to be away, where sight and thought could be free—to enjoy those beauties which methought I loved with a stronger passion than the hum-drum common-place people about me. I did not get the better of my romantic dreams even when married and settled down, for I took care to get a husband that loved what I loved, and not one whose whole soul

\* Our readers will remember an article, published in the December number, from friend "ATTICUS," who considered himself "too contented at home." It has called out a beautiful reply from "ELSE."—Ed.



was in his money drawer and ledgers, and who would by his lack of sympathy smother up my little bit of fancy. And so the first bispings of our little ones were of things we had taught them to love. We gave them all the lessons on nature we could; and when the reality was not at hand, made use of these next best things, descriptions and picturings of her works. And so at three years old they knew more of nature than many who live all their lives amid her haunts. Our sweet morning naps about four o'clock were disturbed by one or two cherubs climbing up and nestling beside us with—"Now, papa, mamma, talk 'bout our farm;" or, "talk poetry."

In the course of time *our farm* was no idle figment of the brain, but a living, broad reality. And such a farm!—just what a poetical, romantic woman might crave. It was as the red man left it, in all its pristine beauty. What happiness to possess these broad acres unmarred by the hands of verdant, uncultivated rusticity, with their obsolete notions! What pleasure to appropriate and adorn it to our own minds! We erected a settler's cottage away back from the road, and left a choice spot for our future home. Three years have rapidly flown in this delectable enjoyment. Orchards and gardens and nurseries and fields have stretched themselves out *as by magic*, say those who have not been witness to the sinewy strength and the sweating brow that have overcome difficulties and produced results; and one who possessed a little corner of romance in her composition, which attracted me instinctively, likens it to the wonders of ALADIN'S lamp. Dear ALADIN, your lamp must have burned slowly if it revealed not things with greater celerity than do we with axes and bush-scythes and plows and spades. But could you eat of the delicious Apples and Pears (thanks to the dwarfing system) and Plums and Cherries and Grapes and berries already here produced in the excellence of their most approved varieties, you would deem it something more than a dream. During this time we have been so intensely occupied in bringing about necessary improvements, that we have neither time nor means to devote to beauty. We live on hope—hope. At even we sit by the home fire, and talk of what we may sometime have and enjoy, as we picture our future home. We rest in sleep, and dream we are enjoying these comforts in full fruition; we rise in the morning, and the early dawn reveals a humble home, with stumps and rail fences all around. Then we go to work with fresh vigor—another home in our eye encouraging us onward. Just such things as you talk about *possessing*, we plan—and enjoy, day after day, in *anticipation*. But we don't waste time in idle dreaming,—oh, no; we work away, early and late—"still pursuing, still achieving;" and we have "learned to labor and to wait."

Some people might think there were inconveniences, discomforts, and trials, attending this life—such as living in a settler's home with not very extensive accommodations, and the brusque appearance of the grounds immediately surrounding—the very part that comes oftenest in contact with the visual organs of *us* whose *sphere* of duty doesn't compass many acres. Time does not permit us to arrange this spot, which we only look at as a temporary locality; for the sternly useful and actually necessary are all the time pressing—pressing. They who would think thus might fraternize with that sordid class with whom I have proven you, sir, could never affiliate. For here, hope, imagination, anticipation, and invention, with execution, may be brought into active exercise. And are they not among our highest attributes—productive of some of our purest pleasures?

While I busied myself this eve, inserting ingenious patches in the knees and elbows of sundry juvenile garments, husband read me the *Horticulturist*; and among other things, your article. So absorbed was I in the repairing of dilapidated wardrobes, that at the time I did not enter into the full spirit of it. My agrestical occupation seemed to earth-bind my fancy. By-and-by husband, who was unusually tired and sleepy, had sought his pillow; and while I went from room to room, tucking in the inmates of the different beds, he was fairly napping. I sat down by our low window, to indulge a little ruminating. Without was spread a scene of varied *natural* beauty, and all about was bathed in moonlight of true western brilliance. With the speed of thought I sought that fair Attical home, and reveled in its classic beauty. Then I plumed my

wings, and backward flew, home again. How very, very humble! A twinge so slight, and yet so keen as to almost start a tear, marked the *change* in the spirit of my dream. Oh dear! when will our home be all of this? When I might enjoy it so exquisitely, why can't I have it *now*? Thou spirit of impatience,—come here to disturb my amiable equanimity—to get the better of my philosophy and my contentment,—begone! That Athenian, with all his surroundings, is not to be envied. I'll warrant there might be some "internal care" sometimes "written on his brow," as on mine this moment; but on my brow it never has rested, and it shall not now. I seized my lamp, slipped softly down stairs and brightened the fire, exclaiming—"I'll write him a letter this moment, and ask him if he dare be so audacious as to assert himself half as happy and contented as we of this Woodside cottage?" Just here my benevolence and kindness were aroused as I thought of ATTICUS stricken with a dangerous malady, and my heart and mind were taxed for ingenious contrivances for his relief. The bright thought soon came; and I revolved it over and over, till I came to think it vastly sage. But though I know your anxious curiosity is all on the *qui vive*, you must have patience; for the unfolding even of my simple plan will require another letter. Yours in the bonds of sympathy, ELsie.—Woodside, Waukesha, Wis.

THE ALPINE HEIGHTS.—The pen and the pencil may attempt, and not unsuccessfully, to reproduce the soft gradations of the beautiful or the abrupt contrasts of the picturesque; but they are alike powerless and paralyzed before the awful grandeur of the Alpine heights, where there is neither life nor motion; where a stern, unsmiling sublimity has moulded every form, and stamped upon the scene the frown of a perpetual winter. There is nothing in the ordinary aspect of nature that prepares us for what we see when we have entered the region of perpetual snow. Here is no hum of insects, no rustle of foliage, no pulse of vitality. There is no provision for animal life in the pitiless granite, ice, and snow, that make up the landscape. The solitary eagle, whose slow circling form is painted on the dark sky above, seems but a momentary presence, like ourselves, and not a part of the scene. Nature is no longer a bounteous and beneficent mother, but a stern and awful power, before which we bow and tremble; and the earth ceases to be a man's farm and garden, and becomes only a part of the solar system.—*Hillard's Italy*.

#### Answers to Correspondents.

(T. B., Trumansburgh, N. Y.) PEARS FOR PROFITABLE ORCHARD CULTURE.—*Bartlett, Virgalieu* or *White Doyenne*, *Gray Doyenne*, *Louise Bonne de Jersey*, *Flemish Beauty*, *Swan's Orange*, *Glout Morecan*, *Vicar of Winkfield*, *Lawrence*, and *Easter Beurre*. For two varieties only, we recommend the two first. For a profitable orchard on Quince stocks, *White Doyenne*, *Beurre Diel*, *Duchesse d'Angoulême*, *Louise Bonne de Jersey*, *Glout Morecan*, *Vicar of Winkfield*, *Catillac*, and *Pomel*. For three varieties only, *Louise Bonne de Jersey*, *White Doyenne*, and *Vicar of Winkfield*.

BLIGHT.—We cannot say that any varieties are free from attacks of this malady, or that any are less liable to it than others, though circumstances occasionally favor that belief. As a general thing, it is less fatal to slow-growing trees and varieties than to those of very rapid and rank growth.

(C. M. G., Upper Lisle, Broome county, N. Y.) NEW VARIETIES OF FLOWERS.—These are produced in two ways: first, accidental sports and variations, which, in some cases, are permanent; and, second, by cross impregnation. New varieties of Tulips, Hyacinths, Daffodils, Dahlias, Fuchsias, Geraniums, Verbenas, &c., are all raised from seeds. Thousands of seedling Dahlias may be grown and flowered, without obtaining even one fine double flower worth saving; the same may be said of all the others.

ORANGES will bear without being grafted or budded, but not until well advanced in age, and the fruit may be worthless.

The Lily is the *Hermerallis (Fuscaria) Japonica*, or Japan Day Lily—a hardy plant for the garden.

Rose.—Probably the *Queen of the Prairie*. We can tell you if you send us a flower, with a small piece of the wood and a few leaves.

"To HAVE ROSES BLOSSOM THROUGH THE SUMMER AND FALL," you must plant ever-blooming sorts, such as *Hybrid Perpetuals*, *Bourbons*, *Noisettes*, &c.

(Several Inquirers.) AMERICAN POMOLOGICAL SOCIETY.—The time has not been fixed, but we will no doubt be able to answer it in our next. We hope it will be so arranged, if possible, that members can attend the exhibition of the Massachusetts Horticultural Society without loss of time. So many exhibitions are held at that season that it will be impossible to avoid collision with some of them.

I noticed, in a late number of the *Horticulturist*, an article on the Peach, wherein the *Hard-Shell* Almond was recommended for a stock. Can you inform me where the *Hard-Shell* Almond can be procured in any considerable quantity, and in a suitable condition to plant? (those found usually in the market are probably too dry to vegetate) and if trees put upon this stock are equally liable to be attacked by the "yellows?" a malady which has been the destruction of most of the Peach orchards in the vicinity of Boston. A gentleman, who is one of the proprietors of one of the most extensive nurseries in the interior of New York, had the kindness to send me a quantity of Peach stones to plant, with a view to disprove the idea that I entertained, that the disease was *local*—i. e. that *all* Peach trees on Peach stocks were subject to it in this vicinity, whether they were, previous to being planted, healthy or otherwise—but these have been equally sickly with those grown from stones gathered promiscuously in the Boston market, notwithstanding they were procured from a section where the disease did not prevail.

I noticed an article in your January number upon the cultivation of the Rhubarb, or Pie Plant. Having seen it grown in some nurseries from seed, with a view of improving its size, it should be known that these seedlings differ widely in their effects. One of the most eminent horticulturists in the vicinity of Boston, who has grown multitudes from seed, informs me that some of his seedlings operate as violent emetics on all who make use of them, and others as cathartics; and, in one instance, he was credibly informed of a large number of people who were taken with the disease generally known as gravel, occasioned by the use of a particular variety of Rhubarb for only a few weeks. (2)

Can you inform me by what mode the New American Weeping Willow is most successfully grafted? and if any particular variety of stock is preferable? (3) C. W. P.—*Newton*.

(1) The Hard-Shell Almond bears abundantly in many parts of the country, and seeds or "pits" could be easily obtained in the fall; or you can import the seed or stocks from France. We cannot say that this will prevent the "yellows." We fear not; but it is well enough to try.

(2) We have not heard of such cases before. In selecting plants to be reserved, from seedling Rhubarb, the largest and finest flavored only should be chosen. There is as much difference in the tenderness and flavor of Rhubarb as of Apples.

(3) Graft on any strong, erect Willow, in the usual "elbow" manner.

Each month I feel a deeper interest in the *Horticulturist*, and gain much valuable instruction from its attractive pages. But the more I learn the more do I feel sensible of my ignorance upon the subjects of which it treats. Every article suggests inquiries upon points respecting which I feel the need of "more light;" and I frequently am inclined to avail myself of the Yankee privilege, which you extend to your readers, of asking questions.

In your leading article, of the March number, upon transplanting trees, you speak of the injurious effect of *wet soils* upon trees. Now, how extended an application has that term "wet soils?" In my garden, and around some of my fruit trees (the ground being flat), at this present time, and perhaps for a week back, the water, which has been accumulating from the rapidly melting snows, stands upon the soil; and even in very heavy rains, the water may collect there for a few hours. It is dry at other seasons. Now, will you rank this among *wet soils*? Will water, temporarily standing, as I have described, around trees, injure them? And if so, how are the *drains*, of which you speak, to be constructed? We have stones in abundance, near at hand; but how are they to be used for the purposes of draining? Should a ditch be dug and *filled* with stones, and the garden plat be inclined to it? or should a *hollow* drain be made, such as you would have to convey water from a wet cellar? Will you oblige me, and perhaps others of the *parvenus* in horticulture, by giving in detail the construction of a *drain*, suitable for a half or a quarter acre of land. (1)

In the February number, in the article upon "Hot Beds" (for which I heartily thank you), you say they "should occupy a dry situation, where they will not be affected by the lodgment of water during rains or thaws." As a protection against water, will it do to place a quantity of stones, say a foot deep, *beneath* the bed? (2)

Are *hard coal* ashes of any service around fruit or ornamental trees? (3)

My *chimney* pipes, constructed of brick and smoothed over with mortar, and painted, have been casting their coat, and have now, from the effects of storms and frost, a very *sandy* appearance. Can you suggest any application that will permanently restore them to their former good looks?

And, one thing more. Will you, soon, describe the process of *thatching*; how a roof is to be prepared for it, and how straw, or any other proper material, is to be applied?



And, *finally*, (I fear you will suspect my profession), will you, when it shall be convenient, give, in the *Horticulturist*, a design for a neat, quiet, country inn, such as may be suited for a rural village, not subject to the arrival of many strangers, but needing, occasionally, accommodations for the comfortable, hospitable entertainment of a "so-journer for a night or day"—a pleasant, home-like place, that shall have no taint of the "vile Virginia weed," and no dark, lurking place for *vill* "spirits?" W.—*Sturtevant, Mass.*

(1) There are grounds which, generally, are quite dry: but from their adhesiveness, or from the impenetrability of the sub-soil, water is not permitted to pass off rapidly. Such soils need draining, and a loosening of the sub-soil, to make them suitable for fruit trees. To see water accumulate on the surface is a sure sign of wetness. If any part of your garden be lower than the rest, make a drain there large enough to contain the surplus water, unless there be a natural outlet. This large drain may be four feet wide and six feet deep, if necessary; fill it with stones, of small size, to within two feet of the surface; lay some straw, brush or rubbish, over them, or some sods, grassy side downwards, and cover with earth. Into this large drain smaller ones may be conducted, having just fall enough to let the water run. We usually make stone drains two feet wide at the top, eighteen inches at the bottom, and three and a half feet deep; fill them with small stones, as described for the larger ones. In a flat, moist garden, stone drains are useful, even if there be no outlet, as a drain in the middle of a walk is sure to keep it perfectly dry in all states of the weather.

(2) This will serve as drainage to some extent. When difficulty is apprehended from water it is a good plan to raise the bed, so as to have the ground descend from it.

(3) None that we know of.

We must defer the questions concerning "chimney caps" and "thatched roofs" to some of our correspondents who have had more experience in the matters than we.

Perhaps our friend DAVIS will give us a design, soon, for a "neat, quiet, country inn."

I PURCHASED, two years ago, a number of Pear trees, grafted five feet from the ground; and have been troubled with a kind of wart that has appeared upon the part where the graft was inserted. I fear that the growth of the trees will be checked. Please tell me what is to be done. A SUBSCRIBER.

The growth of these "warts" is owing to the interruption of the circulating fluids at that point. They may be a greater deformity than an injury. You might pare them off with a sharp knife, down to a level with the natural bark; not all around the tree at one time, so as to "girdle" it, but gradually.

### Notices of Books, Pamphlets, &c.

SECOND FESTIVAL OF THE SONS OF NEW HAMPSHIRE. Celebrated in Boston, Nov. 2, 1862.

THE proceedings at this Festival, and an account of the proceedings in Boston on the day of the funeral at Marshfield, and the subsequent obsequies commemorative of the death of DANIEL WEBSTER, have been published in a beautiful volume. This association numbers among its members many of the most eminent men in the nation, of all professions. DANIEL WEBSTER was their first President, and he has been succeeded by MARSHALL P. WILLER. The speeches, poems, and sentiments, as may be supposed, are of the highest order. New Hampshire has here something to be proud of. We should say the book contains excellent portraits of DANIEL WEBSTER, MARSHALL P. WILDER, SAMUEL APPLETON, and the late JONAS CHICKERING. The following happy allusion to one who has done much, and who we trust will live to do much more, for American horticulture, will be read with interest:

"Our principal theme of discourse here to-night, Mr. President, is New Hampshire and her sons. When I look over this spacious hall, and behold it filled with men brought up in, and brought out from, the lowly hamlets on, and about our hills, and scan the course, as illustrated in the paintings on your walls, of the career of the New Hampshire boy, I feel assured, sir, as says

one of your mottoes—"New Hampshire has a man for any place," and that every where there is a place for him and that he will find it—and shine in it! For instance, sir, take a *wild* New Hampshire boy, it may be from Rindge. Trace him in his course to the City of Notions, and he soon becomes *Wilder* in useful and prosperous business. Intelligent and influential, you find him presiding in the Senate. Public spirited and a lover of rural art, he is President of the Massachusetts Horticultural Society, taking the lead in all improvements of agriculture and horticulture, with his highly cultivated fields, hundreds of specimens of the choicest fruits, and delightful flowers in profusion. In a *Wilder* flight, he is seen as the presiding genius of the National Pomological Society, with his four hundred varieties of Pears in congress assembled. And still winging his way upward, he is found at the head of the United States Agricultural Society, in the exhibition of five hundred of the finest horses, four thousand beautiful women, and twenty thousand first-rate men! And now, here, we find him leading the van in the Festival gathering of fifteen hundred sons of New Hampshire whom he delights to honor, and they to honor him. Here he is, yet *Wilder*, and ever will be, till time shall put a stop to his career in his flights of usefulness, honor, and renown! [Great applause.]

Every man born in the Granite State, where ever fate or fortune may have placed him, should have one of these books on his table.

METEOROLOGICAL JOURNAL, FOR THE YEAR 1853. By T. S. PARVIN. Muscatine, Iowa.

WE have received a copy of this journal, and extract from it the following miscellaneous remarks:

Lowest temperature, Feb. 8th,  $-11^{\circ}$ ; highest, Aug. 11th,  $92^{\circ}$ . Range of temperature,  $103^{\circ}$ .  
 Lowest height of barometer, Feb. 28th, 28.36 inches. Thermometer (attached)  $38^{\circ}$ . Greatest height of barometer, Nov. 21th, 30.00 inches. Thermometer (attached)  $42^{\circ}$ . Range of barometer, 1.64 inches. Mean height, 29.577 inches.

Mississippi opened Feb. 25th. Number of days closed, 69—one less than in 1852.

Last frost in the spring, May 25th; first in the fall, September 10th.

Peach flowered May 3d; Cherry, May 1st; Apple, May 8th; Plum, May 3d; Pear, May 6th. Total quantity of rain in inches, 43.3—15.4 inches less than in 1852.

April.—River very low until the last of this month. Heavy rains set in on the 11th, and from 2.5 to 3.5 inches fell on three occasions in twelve hours, and 11.8 inches during the month.

September.—On the 18th, between 2 and 4 o'clock A. M., 3.5 inches water fell.

October.—Ice on the 2d of this month.

Fruit of all kinds in abundance this year, and an abundant harvest. More sickness, but less fatality, this summer than usual.

FIRST ANNUAL REPORT OF THE SECRETARY OF THE MASSACHUSETTS BOARD OF AGRICULTURE.

A VERY full and instructive report. We find two or three articles which we shall make some extracts from soon. These are, "Fruit," "Woodland," and "The Climate of New England."

### Horticultural Societies.

HORTICULTURE AT THE FARMERS' CLUB OF THE AMERICAN INSTITUTE.—The Farmers' Club of the American Institute is "before the public" as a valuable and influential body, laboring for the improvement of Agricultural science and practice; falling back for reputation and resources on the Institute itself—not very popular with the friends of progress. Yet, at the meetings of the club, there are frequently very important topics discussed, very humorous statements made, and a *little*

sound knowledge disseminated. The entire field of science is covered by the various questions proposed, with what success it is not our province here to say.

At the meeting on February 7th, a very important subject was on the paper for discussion—"The Embellishments of Farms and Gardens." WM. LAWTON, of New Rochelle, Westchester county, was in the Chair. Few of the gentlemen present felt disposed to enter on the subject of the day; and, at the request of the Secretary, R. R. SCOTT offered the following observations:

"R. R. SCOTT—The subject is not so unimportant as may at first sight appear; and, if considered in an extended sense, is worthy of more attention than some of the gentlemen present accord to it. Embellishments may be considered in two classes; those which, while they afford ornament, are also remunerative, or at least of some utility. Ornamental farm buildings may be considered as embellishments, while they may be more convenient than those constructed without ornate character. A very important point may be gained by embellishing the farm. Those persons accustomed to city life, and opposed to living in rural residences, may be induced by degrees to take an interest in agriculture, tending to draw more capital into this most healthy and remunerative of all occupations. As to the embellishment of the garden; the garden, properly laid out, is itself an embellishment as a whole, but if the proper taste is not displayed, and the various objects thrown together confusedly, it ceases to be so. It would appear presumptuous in me to occupy the Club when others, much more experienced, have declined to open the subject. My purpose was to show that economy and embellishment might be united to a certain extent.

Professor MAPES—I concur in the remark of Mr. SCOTT respecting the importance of the subject, and only regret I am not sufficiently conversant with the details to discuss it. I am not prepared to dictate to men of taste in the ornamental department of the farm and garden. The shape of trees itself is an important matter; for beauty in them, as in all other races of vegetables and animals, is spoiled by want of arrangement. The pruning-knife must be used to regulate them, but with skill, and other equally important matters attended to. The eye readily detects the departure from the line of beauty; and the interspersing of trees, of varied outline and figure, adds variety to the landscape. No man should make his approaches by straight lines. The curved line is by all admitted to be the proper one in such cases; the letter S is a good example. The genius of DOWNING was equal to this task, and McNAMARA's system of clumping is very appropriate. The arrangement of colors must be kept in view; how would a lady look whose head was of a color not in accordance with the remaining portions of her dress? A red head-dress, yellow body, and blue skirt, would appear to be but three distinct pieces of a woman.

The Chair made some very good observations on the importance of planting valuable ornamental trees; such as Black Walnut, Butternut, English Walnut, Elm, Beech (Purple and Copper), Ash, and a variety of choice hardy shrubs. Cedars are very ornamental. A very fine specimen of the Cedar of Lebanon may be seen at the residence of Mr. ASH, Throgs Neck, Westchester county; it is seventy years old. Trees grow while men sleep, and are gradually increasing in value.

R. G. PARDEE—I feel a little the importance of this subject, but am sorry that I have been late in coming in. Planting of trees is but little attended to; not so much as it should be. One difficulty is that many do not know how to commence, or how to plant a tree; and must employ others who have a knowledge of the operation. One great means to remove this want, is the reading of horticultural periodicals. The *Horticulturalist*, for instance, when in the hands of Mr. DOWNING—and indeed, now, under the management of Mr. BARRY—has effected much, and is decidedly the most useful work of its kind in the country. Much information may be obtained by conversation and intercourse with such men. Visit the different places, and observe the treatment adopted by men of experience and taste. Removing and transplanting large trees is little understood by most men; all it requires is a little skill and expense.

Mr. PARDEE went on at length to show the advantage of arboriculture.

A gentleman introduced the Magnolia as a good subject for conversation; and requested information as to the Swamp Magnolia, which he obtained from Messrs. MAPES, LODGE, LAWTON, and others.

Mr. LAWTON had a plant sent to him by Messrs. PARSONS, as *Magnolia grandiflora*, which had proved quite hardy.

Mr. LODGE doubted that it was *grandiflora*, as that is an evergreen, and should not lose its leaves in a suitable climate. Many shrubs and plants are more hardy than is supposed; my Camellias stand well during the winter, and will flower at a temperature of 34° to 36° Fahrenheit, if sheltered. In reply to several gentlemen, Mr. L. stated that his plants were young, and had not yet bloomed out doors.

The CHAIR urged the importance of planting at a good distance, as trees grow rapidly and became too close in a few years; take space enough at the beginning.

Prof. MAPES alluded to the peculiarity of the Magnolia seeds; they hang from the seed vessel by a cord, and in moist weather fall, burying themselves in the soil. He tried to bury them by throwing them with force on the ground, but did not succeed.

The CHAIR introduced the Grevillia, Lady Greville's Rose, or the Seven Sisters, as it is commonly called. He entered into a minute and somewhat exaggerated description of its claims to attention, and recommended it to all persons who were embellishing their gardens. It was sold



when first introduced at five dollars a plant. He requested some other person to furnish more particulars as to its history, &c., and called on R. R. Scott to offer his opinion.

R. R. SCOTT. The rose referred to is by no means rare, but may be found in most old collections where there is sufficient space for it. No choice collection would admit it. I agree, it is a very free bloomer, and may be admired by many. The last five dollar rose brought before the public was the *Augusta*; and, as there are very different opinions as to its character, I would be glad to hear some gentlemen who have tried it and paid their money. Such matters are of importance to the unskilled amateur.

MR. R. G. PARDEE furnished some information as to its history and character. We shall reserve his remarks for another opportunity. S.

PENNSYLVANIA HORTICULTURAL SOCIETY.—The stated meeting of this Society occurred on Tuesday evening, March 21, 1854, in the Chinese Saloon, R. CORNELIUS, Vice President, in the Chair.

The display on the occasion consisted of five *Azaleas*, from MR. DUNDAS' and ROBERT BUIST'S houses; and from the latter a collection of twelve choice specimens of green house plants. From MR. COPE, a few new plants, a beautiful basket of cut flowers, hand bouquets, and a dish of strawberries. A large table of culinary vegetables was shown from THOMAS MEGHRAN, gardener to W. S. STEWART, Torrisdale.

Premiums awarded were—*Azalea*, specimen plant, for the best, to John Pollock, gardener to Jas. Dundas; *Dwarf Azaleas*, three plants, for the best, to Robert Buist; collection of twelve plants, to the same; specimen plant, for the best (*Begonia Maritima*), to the same; for the second best (*Almandula Nereidiana*), to Jerome Graff, gardener to C. Cope. A premium of \$2 to Robert Buist, for a beautifully bloomed plant of *Ceanothus Indicum*. New plants shown for the first time—A premium of \$3 to Jerome Graff, for a fine plant of *Dendrobium Aggregatum*; basket of cut flowers, for the best, to the same; bouquets, pair, for the best, to the same.

The Committee called the attention of the Society particularly to the fine *Camellia Ellen*, a seedling of Mr. Mackenzie's, which received the first prize about three years ago; it is still considered a very superior flower.

The Fruit Committee awarded a special premium of \$2 to Jerome Graff, gardener to C. Cope, for a dish of strawberries.

By the Committee on Vegetables—Lettuce, six heads—for the best to Thos. Meghran, gardener to W. S. Stewart; and for the best display, the same. The Committee noticed a plate of Tomatoes shown by Wm. Johns.

Votes of thanks were ordered to James Vick, Jr., for the volume of the *Horticulturist* for 1853—to Charles Downing, for *Ellen's Fruit Book*—to H. R. Noll, for his *Flora of Pennsylvania*—and to Mrs. C. Stanley for two volumes.

*Members Elected*—Henry Tripler; and, to *Honorary and Corresponding membership*, Louis Edward Berckmans, date of Belgium, Plainfield, N. J.

HORTICULTURAL SOCIETY.—We, the undersigned, do request all those engaged in Horticultural pursuits, or friendly to the promotion of Horticultural improvements, to meet at the Brainard House, in Elmira, on Wednesday, the 12th day of April, at 12 o'clock, A. M., to take into consideration, and if deemed expedient, organize a Southern Tier Horticultural Society, for the Chemung and Susquehanna Valley.

S. Fordham, Factoryville; A. I. Wynkoop, Chemung; D. S. Dickinson, Binghamton; Wm. T. Jackson, Havana; E. P. Brooks, Elmira; R. B. Van Valkenburgh, Bath; P. C. Cook, do.; Edward Howell, do.; Wm. B. McCay, do.; H. M. Seward, Elmira; S. B. Rowley, Corning; E. C. Frost, Catharine; Lucy G. Winton, Havana; Robert Covell, Jr., Elmira; L. M. Rexford, Binghamton; Robt. S. Bartlett, do.; Cyrus Strong, Jr., do.; J. L. Robinson, Wellsboro, Pa.

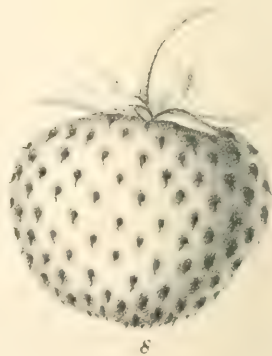
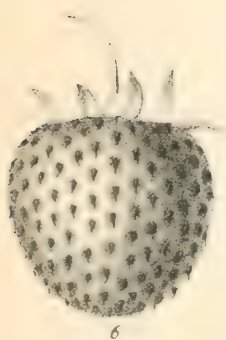
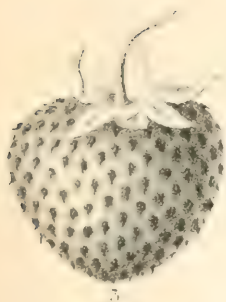
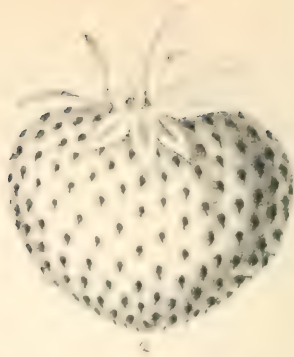
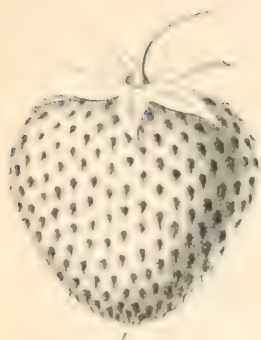
CHESTER COUNTY (PA.) HORTICULTURAL SOCIETY.—At a late meeting of the "Chester County Horticultural Society," the following named persons were elected officers for the ensuing year:

JOHN RUTTER, Esq., *President*. JAMES H. BALL, Esq., and DR. GEO. THOMAS, *Vice Presidents*. JOSIAH HOOPES, *Recording Secretary*. JOS. P. WILSON, Esq., *Corresponding Secretary*. JOHN MARSHALL, *Treasurer*.

PITTSBURGH HORTICULTURAL SOCIETY.—The following are the officers of this Society, for 1854:

HENRY WOODS, *President*. JOHN MURDOCK, JAS. WARDEP, ROBT MCKNIGHT, *Vice Presidents*. J. S. NUGLEY, *Recording Secretary*. W. H. WILLIAMS, *Corresponding Secretary*. A. HERSPERGER, *Treasurer*.





1. *Barrs' Seedling* 2. *Chico* 3. *Hammock* 4. *Walker's Seedling* 5. *Proctor* 6. *Yonkers* 7. *Black Prince* 8. *Monroe* 9. *Harriet*



## Arboriculture—Treatment of the Soil.

AT the close of an article on "TRANSPLANTING," in our March number, we promised some hints on after-culture, which we now proceed to give as far as relates to the cultivation of the soil.

JOHN J. THOMAS, who is a close and accurate observer, and by no means prone to make exaggerated statements, says in his treatise, *The American Fruit Culturist*, that more trees are lost from negligent and improper treatment after planting, than from all other causes combined. The conductor of one of the most extensive nurseries in this country—a man of great experience and very extensive observation—said to us, a short time ago, "I know of no way in which you can do horticulture a greater service, than to urge upon people who plant trees, the importance—nay, the *down-right necessity*—of better cultivation than that which prevails at the present time." "Every day," said he, "they come here and make long and bitter complaints that their trees have died, or have made no growth; and wherever I go, I see trees in orchards, gardens, lawns, and pleasure-grounds, in a stunted, sickly, and dying condition, mainly in consequence of careless and unskillful culture of the ground. If the evil can not be completely reached through the press, the friends of arboriculture should raise a fund, and employ a competent person to go out as a missionary among planters, and preach on this text, '*Good Cultivation.*' If it were possible to compute the loss which this country sustains annually in the mismanagement of trees, the result would be astounding."

We are well persuaded, from our knowledge of the manner in which trees are managed, that there is great room for improvement; and not merely among the agricultural classes, whose attention is chiefly absorbed in their farm crops and stock, and who consider trees as of comparatively little importance, but among those who give a large share of attention to horticulture, and have learned to appreciate both its pleasures and profits. Some are careless: they get their trees planted, and no doubt intend to give them all necessary attention, but unfortunately they forget; other matters more pressing, and for the time apparently more important, present themselves, and the poor trees are left to fight their own battles as best they can. Others are careful and attentive to their trees, but do not really understand what good cultivation is; while they flatter themselves they have done everything for them that could be done, they have scarcely done anything useful or effective. The misfortune is, a very large portion of those who plant are not half in earnest; they go about it without the slightest experience; and instead of making a deep and thorough search for information in books, and in the example set by experienced and successful cultivators, they are satisfied with the merest inkling of information—a simple say-so of a neighbor, which is as likely to be a false guide as a true one. This will never do—there is no excuse for ignorance now in this country; books and periodicals are numerous and cheap, and examples of actual practice are everywhere to be found, from which to gather instruction.

We have observed that within the past year or two, new zeal has been awakened among the better class of cultivators, on the subject of *high culture*. Instead of devoting their time and attention to the collection of new, rare, and wonderful things, they are endeavoring to bring old, well-known, and well-tried objects, to a higher and more perfect standard of perfection. And this is a hopeful sign. We have no admiration to bestow on a collection of ill-grown, half-starved trees and plants, however rare and varied it may be. It affords us no pleasure, nor can we see how it affords any one pleasure, to see trees and plants pining under neglect and bad treatment. As well might we take pleasure in gazing at an unfortunate prisoner through the iron grating of his dismal cell. Give us half a dozen trees well cultivated, with health, vigor, luxuriant beauty, and productiveness, expressed in every leaf and limb, rather than an hundred lean and hungry. Give us one dish of well-grown, beautiful fruits, rather than bushels of "windfalls;" or one pot-plant showing in its well-proportioned form and luxuriant growth skillful and careful training, rather than a houseful of lanky specimens that speak to us only of pot-bound roots, bad soil, careless watering, and bad ventilation. "Whatever you do, do it well," should be the motto of every cultivator.

It is unnecessary to say that the health and vigor of trees depend almost entirely upon the condition in which the roots are placed, because the roots perform the important office of feeders. The spongy points, or extremities of the roots, are like so many mouths, through which the supply of food must pass; and if these are bound up in a compact mass of earth, impenetrable in a great degree to air and moisture, it is impossible for them to find the necessary supply of food. No matter how rich the soil may be, if not in the proper mechanical condition, its fertility will be of no avail; because the chemical combinations which prepare the food of trees and plants can not go on in the absence of air and moisture. Here lies the prime defect of cultivation generally; it is not deep and thorough enough to *reach the roots*. We see people who call themselves very careful cultivators scratching the surface of a narrow circle around their trees with a common hand-hoe, and flatter themselves this is good culture; but if they reflect a moment, they will see their error. What they have done is a mere mockery—no better than the scratching of a sprightly bantam. The points of the roots extend further from the tree than most people suppose; and the earth should be kept completely pulverized all around them, and *beyond* them some distance. Anything short of this is labor lost.

Nurserymen have good opportunity of ascertaining the influence of deep and frequent loosening of the soil. The usual practice in this country is to plow between the rows of trees, as deeply as a one-horse plow can go with safety to the roots, and then to follow with a cultivator or horse-hoe. The plow is used two, three, or four times a year, according to the stiffness or looseness of the soil, and the cultivator as often as once a fortnight say from May to October. This is not only an economical mode or culture, but, in this country, the very best that could be followed. It protects the trees against the effects of our long and severe drouths. It is very common to see nursery trees, thus treated, in a fine growing condition; while others, that have been merely surface-dressed with a hand-hoe, are completely at a stand still. If we turn

over ground that has been kept finely and deeply pulverized by frequent stirring, we find moisture even in the dryest times; while ground that has been left unstirred until it has become hard on the surface, will turn up as dry and as warm as though it had been baked in an oven. In our own grounds, a plot of Norway Spruce is planted in beds of six rows each, with a distance of about eighteen inches between the rows; the plow and cultivator can not pass between them, and they have to be hand-hoed. Between the beds, however, there is a space of three or three and a half feet, which is regularly dressed with the plow and horse-hoe; and the rows on either side of this space have in three years grown nearly twice as large as those dressed with the hand-hoe only. One year we took it into our head to grow a crop of Carrots among some rows of young Apple trees. The rows were three and a half feet apart, and we sowed one row of Carrots in the center. This prevented the use of the plow and cultivator, and we could use only the hand-hoe. In the fall we observed that a portion of the plot of Apple trees not cropped with Carrots, but worked in the usual way with plow and cultivator, were about twice as large as the others, and they were really marketable two years sooner.

We find that deep culture has the same effect on root crops—Beets, Carrots, Turnips, &c.—as it has on trees; the frequent use of the cultivator will produce twice the bulk on the same ground as hand-hoeing merely. This is our experience, at least.

But we will be told that it is impossible to use the plow and cultivator in orchards and gardens, and on lawns, door-yards, &c. We know this; and our object in alluding to them is to show the influence of deep culture around the roots of trees. Where they can not be used, we must substitute some other implements that will serve the same purpose. The common hoe will not; it is a poor implement, useful in a few instances only, and far more popular in this country than it deserves to be. In the case of young orchards, we would by all means advise cropping the ground with something that would require constant cultivation—Potatoes, Carrots, Beets, Turnips, &c. Grain, Grass, and Corn crops, should be avoided as utterly ruinous to young trees. Corn is less so than the others, because it is plowed and hoed; but it smothers the trees, if young, and puts a complete stop to their growth. Where a grain crop may be absolutely necessary in an orchard, a strip should be left in a line with the rows of trees, so that the plow and cultivator might be used.

In plowing near trees, a slow and gentle horse should be used, with long traces, which give steadiness to the plow. The whiffle-trees should be as short as possible, and have on each end a piece of cloth or India rubber, so as to prevent injury in case it strikes the tree. In this way a careful, handy man, can plow within a few inches of the trunk of the tree. In plowing directly over the roots, the furrow should be regulated so as not to cut or tear them, and the plowing should always extend at least two or three feet beyond the roots.

Where the use of the plow and cultivator is impracticable, a *forked hoe*, (fig. 1,) with long and stout prongs should be used repeatedly during the season. This implement is much better than a spade, as it does not

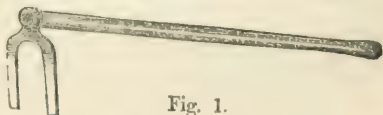


Fig. 1.



cut the roots; and it is better than the common hoe, because it enters the ground deeply, and gives it a thorough stirring up. Such an implement as this is extensively used in France. In the nurseries it is in general use, the rows being generally so closely planted as to prevent the passage of a plow or cultivator between them. The latter implements are considered by European nurserymen as somewhat barbarous at any rate.

We have known people to be so fearful lest they should disfigure their lawn, that they would endeavor to plant trees in the smallest possible openings, and would immediately replace the turf around them. Is it not evident that a tree so placed must either die or grow feebly. To plant a tree on a lawn properly and successfully, a wide hole should be cut for it—*twice or three times as wide as the roots*—and the whole of this circle should be kept clean and deeply pulverized for several years, until the tree has sent out numerous and powerful roots in all directions. No matter when or how trees are planted, this after-culture is absolutely necessary; and we will say to those who have planted recently, that unless they bestow such labor on their trees, better for them now to pull them up and burn them, and thus save all further expense.

*Mulching*—which means covering the ground with half-decayed manure, decayed leaves, or some such material—is a commendable practice in the management of young trees, and of dwarf fruit trees, and all others whose roots are near the surface, and confined to a small space. It not only keeps down a growth of weeds, but guards the roots against frequent changes and the ill effects of a drying atmosphere. This, however, will not render cultivation unnecessary; for with all the mulching the ground will settle down and become compact, unless of an extremely sandy or porous nature.

In speaking of transplanting, we objected to the application of manure around the roots, because they were not in a state to make use of it; and we advised its being furnished as a top-dressing after the trees had become established and the roots active. This top-dressing should never be applied as long as the trees show sufficient vigor



Fig. 2.

and luxuriance: but when necessary, it should always be applied in the fall, so that during winter and spring it may be dissolved and converted into a state in which it may be taken up by the roots. This applies to all sorts of natural and artificial manures or composts. When applied in spring, they have no time to be dissolved before the heat and drouth of summer comes, and they are dried up, becoming an injury rather than a benefit. Liquid manure, however, may be applied during the growing season, and will be particularly beneficial in dry weather. It should be applied weak, however, and in sufficient quantity to reach the roots; a small portion thrown on the surface evaporates immediately, without effecting the least good. In top-dressing with manures and composts, a sort of forked spade should be used, (fig. 2,) which is far better than a common spade, being much less liable to injure the roots; and it stirs up and loosens the soil without turning it over, just as a subsoil plow loosens and pulverizes the subsoil without throwing it up to the surface.

## EVERGREEN TREES.—THE AMERICAN HOLLY.

BY REV. JAMES RICHARDSON, JR.

WE took occasion so often, while our universally lamented friend DOWNING was at the head of the *Horticulturist*, to discourse on evergreens and their culture—their value in giving warmth and shelter to tillage land, their use in adding an air of comfort and elegance to the wintry landscape, and the peculiar beauty of our native trees,—that, to some of our readers, we may have grown wearisome, and seem already to have exhausted the subject. So peculiarly beautiful, however, and at the same time so little known is the tree whose name makes part of the heading of this article, that, at the risk of being regarded as tedious, we can not but feel it a duty to urge a few words in its praise, for the sake of calling the attention of planters to its particular characteristics—its beauty and its value.

But few of the denizens of our brick-and-mortar cities, and our busy, crowded towns, are aware of the wealth of beauty that our native American forests, and the very woods about them, contain, to adorn the lawns, the shrubbery, and the hedges of our home landscape,—the rich and luxuriant vines and plants and shrubs and trees, with their various foliage and blossom, and especially the variety, grace, and elegance, of our own native evergreens. When a boy, with what a thrill of delight did we hail the sight of the princely blooming Rhododendron, as, through vistas of mossy Cedars, the oriental magnificence of its perfumed blossoms burst upon our vision, as we fearlessly trusted ourselves to the quaking bog of the solitary swamps\* where they unfolded their regal glories. With what eager enthusiasm, down in the deep, dark dells, or on the airy mountain steep, did we follow, on and on, gathering, with a never satiated passion for beauty, the superb native boquets of Mountain Laurel,—now seeming like masses of drifted snow hidden away in the cool woods, as they paled in the deeper shadows—now blushing in the broad light of day into richer loveliness—or growing rosy and scarlet, as, higher up, they became flushed with the more exhilarating air and brighter radiance of the mountain cliffs. Search the world over, and where will you find more magnificent and splendid evergreen shrubs than these brilliantly blooming Kalmias and Rhododendrons of our chill and homely New England forests? And what sight more rich and enchanting, than a mass of these charming flowering shrubs half-concealed, half-revealed, beneath the groups of trees that shade our dwellings, or resting their glossy leaves and queenly flowers on the green and shadiest portions of our lawns! Dear to us, too, is the bright *Prinos glaber*, or Ink-berry bush, humble though it be and unknown to fame, with its crown of dark, shining foliage, whose depth of rich brilliant green the severest frosts of winter never deaden, and the polished gloss of whose varnish neither the roughest storms nor the most freezing wintry winds can tarnish: but, in sunshine and in storm, in winter's cold as in summer's heat, there it is, always so bright, so deeply, radiantly green, reflecting the light and glory of the

\* BIGELOW and others are mistaken in supposing them to be found in only one swamp, near Boston; we have known several in different towns.

heavens; and, when these are shrouded, seeming like a living smile beaming up out of the earth. No foreign, costly Box tree, with all its wide renown, can compare with this simple, rustic beauty, of our plain old colony lands. Then edge your groups and borders, and mingle your shrubbery with this humble native New England evergreen. There, too, is the feathery Hemlock; and the dark, dense fringe of the Black Spruce, that, in cultivated grounds, equals if not excels in beauty of foliage its more distinguished and aristocratic Norwegian brother; and the Yellow Spruce, with its bright sunshiny hue, making the darkest day look gladsome, that in rich deep soils is often mistaken for the Norway. The Fir, too, despite its formal stiffness, as it sends its stately spires up among the ancient Elms and Ash trees that surround the antique parsonage, or that embower the hospitable mansion of the good old country gentleman, telling of the culture and refinement of other days, and the wealth and worth of the good old times that have gone, is never to be wholly spurned. And, oh! the glory and the grandeur of the giant White Pines, with their great mossy trunks, rising up from the brown-carpeted and solemn aisles, like pillars in a mighty cathedral—the pillars of God's first temple—with their leaves like a myriad harp-strings tuned to worship, or prophesying, in the harmonious murmurs of their unending song, of their future home amid the ceaseless roaring of the waves, whose crests they shall nod over as tall spiry masts, or breast as stout timbers of some gallant vessel, in years to come. Oh, plant a grove of Pines, good friend, on yonder bare and desolate-looking ridge, or over that barren, sandy hill-side, for your children and your children's children to rejoice and glory in. Were we the king of this fair land, it would be one of the earliest proclamations of our benevolence, that evergreens should be planted, among other shade trees, on all the roads and avenues of the kingdom, on the northern exposures of the dwellings of the people, and on all the breezy summits of the hills, to give defence and shelter, warmth and beauty to the landscape.

But we are forgetting our friend the Holly tree, in our thought for the rest of the evergreen brotherhood. Of all our beautiful native evergreens, there is none more peculiar and striking in its beauty than the *Ilex opaca*; and I am charmed now, as I gaze out through the frosty air of the bitter winter day, on the rich, dark, glossy green of its broad and quaintly-cut spinose foliage among the shrubbery. Late in the autumn, in our rambles in the interminable woods of the "Old Colony,"—for though the first settled portion of the country, it is now the most of a wilderness of any, with miles on miles of uninhabited forest, where still the light-footed deer has his covert,—in an open pasture ground we came suddenly upon several splendid specimens of the American Holly, each standing isolated, and glowing in the late autumnal sunshine; and, truly, no sight of the kind was ever more charming to the eye of a lover of beautiful nature. Though not more than six or seven feet high, and extremely thick-set, they were perfect in shape, and loaded with their coral fruit; and the contrast of the deep glossy foliage with the brilliant scarlet berries with which the branches were so thickly studded, presented a *coup d'œil* that excited our most enthusiastic admiration. In all our various excursions in the woods and fields, from childhood and youth upward, we had never met with any wild growing thing so beautiful,



so charming, so altogether *perfect*, and so desirable as an ornament for the cultivated lawns and shrubberies. Nay, more than this, we feel that we can say most sincerely, that we know of no prized and costly exotic from far-off foreign climes, that can surpass it, especially when thus decked out with its jewels of brilliant coral. And, not only the size and rich deep green of its foliage, but the *quaint and rare cutting of its leaves*, give to it a striking and peculiar effect, and add much to its value. We would gladly have paid an extravagant sum to have had even one of these charming specimens, in all its perfection, growing on our own grounds; but, finding from the size of their trunks, and their ages, as well as from the stones and rocks among which they grew, that we could not have the faintest hope of success in transplanting them, we bore away as splendid trophies—barbarous as it may seem—a load of branches, coral and emerald, for admiring friends, placing a rich boquet of them even in front of our church pulpit, where the usual offering of flowers is laid, which formed the fittest possible decoration of the sanctuary, the dark and glossy leaves of strange and mystic shape, and scarlet fruit, harmonizing finely with the dark, carved rose-wood of the sacred desk.

The Holly, with us, is seldom found in the open ground; it generally sequesters itself in the thicket of the forest, where, in the solemn shadow, and under the drip of the trees, it best flourishes. This peculiar characteristic of the Holly tree constitutes its great excellence for planting out as an evergreen among other trees and shrubs. Although, perhaps, it grows in more beautiful shape, and makes a more perfect tree, when standing unsheltered in the free air and broad sunshine, yet its growth in such situations is exceedingly slow and laborious, and without a great deal of moisture it probably would not attain a height of six feet in twenty years; while under the moist shelter of the forest it increases rapidly, making often a foot or more of growth in a year, and we found numerous specimens in our after excursions that had thus attained the height of twenty-five to thirty feet. There are so many of our most ornamental evergreens—as the Firs, Spruces, &c.,—that refuse to flourish under the shade and drip of other trees, that a tree that makes its most rapid growth, and *rejoices* in such situations, is a very great desideratum. We have been compelled to leave awkward spaces and ugly gaps in plantations of this kind, from the proximity of some large deciduous trees, or the broad shade of some grand and beautiful Elm, whose glories we could not spare, though it would permit no other growth under its far-extended branches. In such places, however, our friend the Holly tree finds its natural and appropriate shelter, and flourishes in grateful luxuriance. There its leaves assume a darker, richer, glossier green, kept always moist and darkened from the summer's "too excessive ray;" and its otherwise dwarfed proportions will thus assume a lighter form and a more stately size.

In transplanting the Holly, we have generally found the roots of the small trees to run near the surface, and above the roots of other trees; and this renders them easy to take up when young. In re-setting them, we would suggest the commixture of stones and rocks in the soil in which they are planted, and a good covering of chips and forest leaves

We have made collections of the berries also, as well as of the young trees, and hope to interest our horticultural friends in their cultivation. There is no plant that would make a more quaintly beautiful and striking hedge than this our native *Ilex*. In the open ground it is of remarkably thick growth, and its stiff and well-armed leaves would render it impenetrable even to fowls and smaller animals, and no ox or wild bull even would dare to thrust his muzzle more than once into their prickly thicket; for, in words from the poet SOUTHEY's ode to the Holly tree,

"Below, a circling fence, its leaves are seen,  
Wrinkled and keen;  
No grazing cattle through their prickly round  
Can reach to wound;  
But, as they grow where nothing is to fear,  
Smooth and unarmed the pointless leaves appear."

As beautiful and as famous as the English Holly has been for ages, it can not be cultivated in our severer climate and more changeable winters; but our own Holly, I think, will be found by culture to be not a whit inferior to its more distinguished foreign brother, and to deserve all the enthusiastic encomiums that it has received at the mouths of the poets; and we may say of our New England *Ilex*, in the words of ELIZA COOK—

"The Holly! the Holly! oh, twine it with Bay—  
Come, give the Holly a song;  
For it helps to drive stern winter away,  
With his garment so sombre and long.  
  
"It peeps thro' the trees with its berries of red,  
And its leaves of burnished green,  
When the flowers and fruits have long been dead,  
And not even the Daisy is seen.  
  
"Then sing to the Holly, the Christmas Holly,  
That hangs over peasant and king;  
While we laugh and carouse 'neath its glittering boughs,  
To the Christmas Holly we'll sing."

## ON THE EMPLOYMENT OF STATUARY IN THE DECORATION OF GARDENS AND PLEASURE GROUNDS.

BY E. MUNN, NEW YORK.

THERE is perhaps no branch of Landscape Gardening in which the correct principles of taste are so frequently violated as in the introduction of statuary into ornamental grounds, and yet there is none in which the rules by which it should be regulated have been better defined. It is not unusual, for instance, to see rustic alcoves and bridges, or summer-houses in the Swiss style, *ornamented* with statuary in marble or white stone. Nothing can be a greater mistake. However beautiful in themselves,

such objects are wholly at variance with the situation ; and it is impossible to introduce them in such positions, without injury to that consistency of purpose which is a primary consideration in artistic arrangement.

There are two modes of placing statuary in grounds. One is, to connect it with architectural structures — either the house, or some of the subsidiary edifices, such as a conservatory or other building, (and this is generally deemed the most desirable situation for it) ; or else to place it in the vicinity of avenues or walks, in the midst of the rural scenery of the place. In connection with the house, or with any important subsidiary edifice, it is considered admissible to introduce almost any species of sculpture ; because, where it is supported by a mass of building, the character of art *in both* maintains that “unity of purpose” which should be apparent in all attempts at tasteful arrangement. But where it is contemplated to introduce statuary into rural scenery, without its being in view of architecture of any description, two circumstances require attention ; the one, the kind of scenery ; and the other, the subject the sculpture is intended to represent.

In scenery now styled *Gardenesque* in character, in which the “beauty of repose” is the prevailing feature, provided rustic ornaments (such as alcoves constructed of rough wood) are not present, statuary of suitable subjects may be introduced with perfect good taste. In reference to statuary placed in such scenes, those are best adapted to the purpose which embody some rural conception — as Flora, shepherds, or some idea which is usually associated in the mind with the relation of country life. But if the statuary introduced into rural scenes is in considerable quantity — as, for instance, a series of statues, busts, or vases on pedestals, within sight of each other on either side of a long wide walk or avenue — the subjects may be as varied and as diverse as may be wished : because, in the latter case, by their number they become an important feature of themselves, indicative of an intention that they shall command the attention of the spectator independently of the surrounding scenes, in the same manner as would be the case in a sculpture gallery ; whereas, in the instance of simple *specimens* of statuary placed in the midst of rural scenery, it is evidently proposed that it shall be viewed rather as an additional ornament, to add effect to the surrounding beauties, and a propriety of subject is therefore required.

In scenery of the grand and picturesque character, such as SALVATOR ROSA portrayed, whether this is derived from the presence of rocky or barren scenery, or from the general disposition of the natural features of the place, statuary must be introduced with great caution ; for in such situations it is very difficult to select subjects which are not in themselves repulsive to the ideas suggested to the mind by the ruling character of the scene. In such positions, I should hesitate much to recommend the introduction of statuary at all, that represented living objects, except equestrian statues, or statues embodying some mythological composition associated with the brute creation. Vases and architectural fountains or fragments are among the most successful embellishments for which the picturesque can be indebted to the chisel of the sculptor.

In whatever situation statuary is placed, therefore, in the open air, it becomes necessary to well consider the appropriateness of subject and of situation ; and this is the



more imperative in proportion as the desire exists to place statuary in single specimens alone.

The foreground of a largeinery affords a most appropriate situation for the formation of a flower-garden in the Italian style, in which *statuary* is necessarily the predominant feature; but it only admits of adoption in two situations—the one immediately adjoining the house, and the other in connection with a conservatory of sufficient extent to support the general design. The low terrace wall is an indispensable adjunct to the introduction of this style. It serves the double purpose of isolating from the adjoining plantation the geometrical character of the flower-beds which the adjacent architecture renders it necessary to employ; and it forms, as it were, a general base for the assemblage of sculpture distributed through it; for when the statuary is placed, and the low terrace wall with its wide coping of stone is erected, to the eye of a spectator viewing the whole from a short distance, the top of the terrace wall will appear to form a common base for the whole of the statuary.

In the form of the flower-beds, in this style of garden, angular and straight lines alone should be made use of, as being most in keeping with the architectural character of the whole. Vases or urns should be placed at the several corners of the terrace wall. Plants may be placed in the vases in the summer, but they should be confined to those species which are of a formal, stiff outline, as being most consistent with architectural decoration—such as the *Agave Americana*, the *Yucca*, the Cacti family, *Hydrangea*, Orange trees, and some others.

## DIELYTRA SPECTABILIS AS A GREENHOUSE PLANT.

BY EDGAR SANDERS, GARDENER TO J. F. RATHBONE, ALBANY.

THIS Chinese production is worthy a place in every greenhouse, its singular and peculiar shaped flower being quite distinct from anything out at the same time—a point of considerable importance in a selection of plants. Its habit, too, is drooping and graceful, its delicate rose-colored and purple-tipped blossoms hanging like ear-drops from several axillary racemes. It is probably nearly or quite hardy enough to stand our winters, of which I am unable to speak from experience; but, with a slight protection of its roots it will undoubtedly stand, and form a magnificent object in summer. Its culture in the greenhouse is simple, requiring no important room a great portion of the time; and, by having a succession of plants, may be had in flower from the first of February till those in the open air come in. It is very impatient of much heat, and, if fine specimens are wanted, should at no time receive a temperature over 50° artificial heat; solar heat it does not mind.

We procured a huge root from the open ground of a nursery, on the 4th of November, and gave it the following treatment. It was potted at once in a 13-inch pot. The root had to be divided into three parts to get it in, using loam and rotten dung—two parts of the former, one of the latter—with a little sand, to fill up the remainder

of the pot. It was then set in the coldest part of the house, on the floor, and but seldom watered till it began to push, which was about the middle of January. It was then more freely watered, and as soon as the growth had lengthened to six inches, lifted to the front stage. It now began to grow rapidly, and was occasionally treated with a dose of weak liquid manure water. On the 23d we had it at our show, and on March 7th made the following entry in our note-book: "*Dielytra spectabilis*—thirteen spikes eighteen inches high, from four to six racemes on a spike, from eight to twelve blossoms on a raceme." It is still beautiful, and likely to be for some time yet, as several of the spikes that remained dormant at first have since started, and laterals spring from those that first flowered, which keep up a succession.

As soon as it has exhausted itself it will be cut into pieces, to form cuttings. These will be struck and turned into the flower-garden for summer display, from the roots of which a large stock will be laid in for next winter's operations.

[The *Dielytra* stands our climate at Rochester without protection. It is, without exception, in our opinion, the finest hardy herbaceous plant introduced within the last twenty years. Our experience with it in the house enables us to endorse all that Mr. SANDERS has said of it. Our artist has taken a drawing of this beautiful flower, which we shall probably give in the July number.—Ed.]

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## THE CULTURE OF CELERY.\*

BY WILLIAM CHORLTON, NEW BRIGHTON, STATEN ISLAND.

*Earthing.*—Where it may be required to have Celery early, the earthing must be commenced accordingly; but, generally speaking, too much hurry in this case is not good. One of the reasons why Celery is spongy and insipid, is owing to the soil having been in contact with it too long. While the temperature continues warm, and growth is proceeding rapidly, three to four weeks is quite enough to prepare for use; so that according to the time it may be wanted, the earthing may be commenced to correspond. There is no difficulty in producing it ready for table by the beginning of August, by a little earlier sowing and extra pains-taking; but more commonly it is considered quite early enough at the beginning of September. The old notion that this vegetable is not good until it has been nipped by the frost, belongs to bygone days, and it is time that we got rid of such ideas; be assured, that if the frost *acts* upon it, the flavor will be injured, and the crispness destroyed. When commencing to blanch, go over and break out all outside offshoots or decayed base-leaves; loosen up each side of the row, keeping clear of the roots; break up the soil well; lift the leaves up into a perpendicular position, and while holding them so with one hand, fill in and around with the other about six inches of earth, taking care that it does not fall down into the heart; and always choose a dry day for this operation. After pro-

\* Continued from April number.

ceeding thus along the whole length, stretch a line about eighteen inches from the row on each side, give a cut outside the line, and lift up enough soil to make an equal surface with that placed to the plants. This process will make what was previously a trench into a bank, with the double row of plants in the center. As growth progresses, this operation will have to be repeated. A practiced eye requires no guide as to how often, or how much ought to be done, and no definite rule can be given; for where there is great luxuriance, more depth and often repeated earthing will be necessary; but if we take a medium average, once a week will be a general requirement for three or four weeks. Some persons do not earth at all until they intend to do it finally; but, excepting for the latest crops, or that which is wanted for spring use, this practice is open to much objection. In the first place, the stalks have by this time grown outward to a horizontal position, and become solid, so that they will break or split at the bottom, which brings on rotteness, and disfigures the form of the head. The soil also is more subject to fall down into the center by the great depth which is put on; and as the stalks have hitherto had light and air, the leaflets are more numerous and situated closer to the base, and consequently they have to be covered up. These often rot, and always prevent the young heart-leaves from ascending straight, the result of which is distorted form and crooked stalks.

With regard to that portion of the crop which is required for latter winter and early spring use, an exception to this is advisable; for, as stated above, if the soil remains too long in contact, the quality is injured. Therefore, in this case, do not earth up any further than merely to give an upright position to the stalks; and when it is to be done, finish at one or two operations. The best time to commence earthing this late portion, is a little before frosty nights begin to occur.

*Protection in Winter.*—Although Celery is very hardy in a natural or poorly grown state, it is soon injured by frost when gorged with luxuriance, or blanched; therefore, as we have it in cultivation, winter protection is necessary. It is also soon rotted or rendered insipid if kept too warm, on which account a temperature that is only a few degrees above the freezing point is best. Avoid close, damp cellars; for in such places it is almost sure to decay. Often as this plan has been tried, there have been few cases of success. The best method which has come under my own observation is as follows:—Choose a piece of ground where the water can pass off freely, and bed the heads in rows of about six in each, and in an upright position. Commence by raising a bank against which the first row shall rest; lift each head, and preserve the roots carefully, which may be done by cutting down one side of the row in which it has grown, and afterwards putting the spade under each plant. Before lifting, tie a piece of bast or twine around the upper part, which will prevent the stalks from breaking, and also facilitate the process. Remove all decayed leaves, and fix carefully against the bank almost close together; raise up in front enough soil to cover nearly to the top, leaving only a portion of the top leaves exposed. The next row may be a few inches asunder, and so on. Afterwards leave all uncovered until wet or frost sets in, when a coping of boards or shutters should be fixed over. Where there is not this convenience, a quantity of pea-stakes may be laid over the top; but whatever be used,



a coating of litter, pea haulm, or other like material, will be required to keep out the frost. It may also be left to winter in the ridges; but in this way a great quantity of covering is necessary, and which afterwards requires much labor to remove. The first is most economical, and is equally safe.

*Saving of Seed.*—As the saving of seed is of some importance, a few remarks on this head may be of service. Without stopping to discuss the physiological point respecting the reproduction of permanent varieties by seed, it is a well-known fact to those of experience, that Celery, although one of the most constant in this respect, is nevertheless disposed to sport; consequently, if any particular variety is wanted to be kept pure, those plants which are retained for this purpose ought to partake most truly of the peculiar characteristics of the kinds, and also should be removed from the influence of impregnation by other sorts. The first may be accomplished by choice of plants, and the latter by not having any other in bloom in the same vicinity. It is well, too, not to blanch, nor grow too luxuriantly, those which are intended for seed, as under these circumstances the structural texture is retained more solid, and the progeny will partake of the same property. Everybody knows that a spongy head of Celery is worthless, therefore we should use all caution to preserve the solidity; and the above items, if attended to, will ensure success. Notwithstanding the natural hardiness of this plant, there are some winters so severe and changeable that it is advisable to preserve, even in this case, the plants from extreme cold, for which purpose a cold frame is the most suitable; but if this is not convenient, a light covering of marsh hay or straw may be thrown over them, to prevent the effects of alternate frost and thaw.

With regard to different kinds, there are several shades of color, gradations in size, and variety in flavor, each being prized according to the caprice of different cultivators. Two classes are generally recognized, viz., Red and White. The Red is generally considered to be the hardiest, and it has more pungency in the flavor, partaking somewhat of the natural quality; and upon the acknowledgement of these properties is hung the faith of many persons. The fact is, that when Celery first became an established favorite, we possessed no really good kinds but what were red, all the Whites being then spongy in substance, and sweet and insipid in flavor; and it is readily seen from this why the White was more tender in winter. Of late years the latter class has been much improved, and we have now several kinds that are equally hardy, as firm and brittle in substance, and in every respect as good in quality, as is the Red. For the sake of experiment, three years ago I grew *Seymour's Red* (thought to be the most hardy of the Reds,) and *Seymour's White* (the kind that is so generally brought to market in this neighborhood,) in different ways, only that both were treated alike, and planted in the same row. At the end of winter, although both were good, the White was in the best order; and, so far as I have seen, this is the best variety that we have for general cultivation. These two kinds were raised by Mr. SEYMOUR, late gardener to the Countess of Bridgewater, in England; and he certainly deserves the thanks of all lovers of good vegetables, for his persevering efforts in improving so desirable an esculent.

When winter is over, the seed plants should be removed carefully into a spot of very rich ground, and freely exposed to the sun, by which they will be invigorated and enabled to flower strongly; the seeds will be plump and well developed, and in their turn will produce strong and healthy plants. As all the seed does not ripen at the same time, it should be gathered at intervals, spread out upon paper in a dry but cool room, and when thoroughly dried it may be cleaned and stowed away in bags till wanted for use. Celery seed will keep good for several years, but the finest plants are raised from it while fresh.

*To produce very fine Celery.*—Hitherto I have only treated of this vegetable so as to produce an ordinarily good sample, and in a way that will pay the market-gardener; but if it be desirable to have extra quality and the largest size, some difference should be made in the culture. Celery will feed freely on very rich manures if judiciously applied, but not otherwise; and the best time to use such is during active growth, and after the greatest heat of summer is past. There is no difficulty in obtaining heads of eight to ten pounds weight, and in some instances even more, if the following directions be adopted:

Raise the plants, and plant out as before directed, with the exception of the trenches, which should be opened wider, and about half as much more well-rotted manure added. When a trifle advanced in size, and growing fast, place a few inches of fresh "maiden" earth along side of the stalks; and if there is a hog-pen at hand, procure a quantity of the drainings and slush, fresh as it is, convey it to your rows of Celery, and after raising a small ridge outside and away a short distance from the plants along the row, pour it on the surface. *Take care that this does not come too near the stalks,* or it will most assuredly rot them; and do not mutilate the roots, or they will be destroyed. Do not apply this or any other strong manure during hot weather, or the increased luxuriance will not bear the sun's rays, and the leaves will blister. A wet time is the best for this kind of application; and in the absence of frequent rains, use water very freely. If hog drainings are not to be had, a good but not equal substitute is dung-hill drainings, or guano dissolved in water at the rate of fifteen gallons to one pound. If the hog wash be used, one application will be enough; but of the others, a repetition every three or four days for three weeks will be necessary. The after-soiling may proceed as before advised, with the exception that if deferred longer the weight will be greater.

It may be thought that this is a strong dose; but we must recollect that it is only applied when growth is most active, and the plants under favorable circumstances as to temperature; and most vegetables will flourish at this period with manures of so rich a nature as to kill them at other times. It is from a want of knowledge on this very point, that so much mischief is frequently done in this way. What is here advised has often been done in my own practice, when wishing to obtain extraordinary results, and has answered the purposes for which it was intended.

The following criteria will show what a first rate head of Celery is, and how it ought to appear on the exhibition table. The weight may be from six to ten pounds. It should be taken up with the roots preserved, and cleanly washed. The external

form should correspond in length to girth — not short and thick, nor long and slender. The base immediately above the roots ought to be nicely rounded — not bulged, nor split; the stalks solid, brittle, straight, perpendicular to the base, with the leaflets confined to the upper part, leaving the stem clear below. The blanching should extend in the second inner row of stalks up to the leaves, and to the base of the outer ones; all inside of this ought to be clear and eatable, and proceed in the middle nearly to the top of the leaves: the whole available substance for use being about one-half the entire bulk. There ought not to be any spots or freckles of any kind on any part, nor the least sponginess or hollowness. If a White variety, the bleaching should be perfectly white; and if a Red, of a clear whitish-pink, shading off to white in the heart. Such is a first rate head of Celery; and I hope that more attention will begin to be paid at exhibitions to a better standard of excellence in vegetables, for there is yet much room for improvement.

## PRUNING AND MANAGEMENT OF THE PEACH TREE.\*

SECTION V. — THE PRACTICE OF PRUNING APPLIED TO THE PEACH TREE TRAINED IN THE SQUARE FORM.

### I. *Formation of the Tree.*

146. It has been shown (55) how the young tree was planted. We will now return to that point, and examine the operations which it must each year undergo, in order that it may assume the square form of training, and be well filled up in all its parts, with an equal vigor throughout.

147. As stated (56), the young tree on being planted in autumn is cut back to eight or ten inches above the place where it was budded; see fig. 6, which represents the tree as it comes from the nursery — *b* is the bud, *a* is the point to which it is headed back when planted. In the following spring, the development commences of the eyes *a* and *b*, destined to originate the two main branches of the tree; and eyes situated lower than these, as *c*, are not destroyed till the two shoots from *a* and *b* are fairly started.

148. During the first year of planting, it is sufficient to superintend the growth of the two young shoots by training them loosely in the form of a somewhat open V. Their training is continued according to their growth, and so that the young shoots may take a perfectly straight direction. The first year's growth, except in case of accident, generally gives the results which are represented by fig. 7. At this stage, it is of importance to direct the young shoots by two perfectly straight rods.

149. If by any chance one of the young shoots should perish, the survivor must be trained upright, and pinched when ten or twelve inches in length, in order to form well-established eyes at its base, with the view of obtaining, in the following spring, two young shoots fit for commencing the two main branches.

\* Continued from April number.



150. FIRST PRUNING. — *Second year of planting.* Fig. 7 represents the results of the first summer's growth. We begin by cutting off the piece *c*, closely to the angle formed by the two branches. This portion of stem has been retained till now, in order that its three young shoots, which have been pinched when necessary, might assist the two buds *a* and *b* (fig. 6) in drawing the sap. The latter have made the shoots *A*, *A*, (fig. 7,) of sufficient growth to allow of our pruning the two main branches to the proper length. This length is about fifteen or sixteen inches, measuring from the insertion of the branch. We must now examine the state of the two main branches, and endeavor to find two properly placed eyes at the above height. One of them, *a*, (fig. 7,) situated on the upper side, is intended to serve for the prolongation of the main branch; and the other, *b*, (in the same figure,) and situated on the lower side, to form the first lower secondary branch. The other main branch, *A*, is examined for two similar eyes at the same height, or nearly so. When that is done, each of the two main branches is pruned on the eye *a*, which becomes the terminal pushing one; and the eye *b* gives rise to the first lower secondary branch.

151. As the effect of the pruning on the eye *a* is to induce great activity of vegetation (65), the resulting shoot must be watched, and nailed at the proper time. The eye *b* must be equally watched, and nailed when necessary, training it by a rod in the right direction, endeavoring at the same time to keep its strength in proportion to that of the leading shoot of the main branch *A*. If necessary, superfluous shoots are removed at the disbudding, especially those at the front and back. The excessive growth of those that are overbearing is kept down by pinching; and lastly, we must endeavor to maintain a constant balance as regards length and thickness of shoots between the two wings. It is of importance not to concentrate the sap too much in young trees, but to leave it the necessary outlets. All regulating operations, such as pinching, should be conducted according to the state of growth of the tree, and should be performed to a greater extent when it is very vigorous.

152. If the balance is disturbed, it can be restored in several ways. The tree may be unnailed and re-nailed, so that the weakly wing may be more or less vertical, while the stronger one is lowered. This means, seconded by disbudding and pinching, is generally sufficient. But if it do not produce the desired effect, the weakly wing may be brought out from the wall, in order to give it still greater liberty (100). Nevertheless, that its branches may not take an improper direction, one or more props are placed behind them at six or eight inches from the wall. The wing is supported on these props so as to give it more air, which will greatly tend to strengthen it. It might be left perfectly free, if it were not for fear of the blasts of wind, which might break some of the branches, or bruise the bark and the green parts by shaking; it is therefore prudent to fix it as above. When the equilibrium is restored, the tree is re-nailed with regularity. The wing should not be brought forward from the wall except in fine weather, because, from its distance from the wall, it is deprived of the protection of the copings and screens, and would be more exposed to frosts. In pointing out this mode of restoring the balance between the two wings, a mode which can be employed for trees of any age, the necessity of giving a perfect regularity to the young

tree from the very commencement is insisted on ; because it appears that when once the sap begins to distribute itself equally through the different parts of the tree, it continues to flow with greater regularity, and presents fewer difficulties to a fine formation.

153. There is another very simple mode, which, though not so efficacious, suffices in the majority of cases. It consists in placing a shading of straw mats, or boards, at eight to ten inches above the stronger wing. This privation of a certain amount of light and air is often sufficient to enable the weakly wing, which is left uncovered, to attain the same growth as the other. The influence that shading has on vegetation may be employed for full-grown trees, to restrain the growth of the upper secondary branches by retaining over their extremities the straw mats which are joined to the copings till after the fruit has been formed.

154. If these means fail, we must, at the following winter-pruning, leave the shoots on the weak parts as long as possible, and even, in some cases, not prune them at all, leaving both the terminal eye and all the young shoots, so that by their growth they may draw the sap towards the part. At the same time, the shoots on the strong part should be pruned short ; all superfluous shoots should be removed at the first disbud-  
ding ; and the progress of those remaining must be carefully watched, in order to allow them only a limited growth. This mode, which is very efficacious, is founded on the principal of physiology that leaves are the respiratory organs of plants, toward which the ascending sap is continually drawn, to be in them elaborated, after which it descends towards the roots. The ascent of the sap-fluid through the alburnum, and its descent by the vessels of the bark, maintain a more active degree of life in these parts, and thus their vigor is increased in proportion to the amount of the circulation of that fluid. This means may be employed on trees of any age ; and it always succeeds well, provided the parts operated on be healthy, though of unequal strength ; but it must not be used on badly-organized branches, or on those suffering from languor resulting from disease. In the latter case, we must begin by curing the disease.

155. There is another mode, which can only be employed on bearing-trees. It consists in leaving a great many Peaches on the strong parts, because the nourishment of the fruit being very exhausting, the vigor of the branches is diminished in proportion to the quantity of fruit they bear. On the other hand, the vigor of a feeble branch may be restored by limiting the number of its fruit. The latter proceeding is rarely used by the cultivators, because they must have Peaches, whatever be the consequence.

156. These means may be greatly assisted by disbudding, pinching, summer-pruning, and even by defoliation ; and these operations may be employed separately or combined, according to the age and growth of the tree.

157. The results of the first year's growth are not always such as have been supposed. Often the vegetation is languid, and the shoots are neither so long, nor so thick, as to enable us to originate the first lower secondary branch. If such be the case, its formation must be deferred till the following year ; and the two main branches are pruned to eyes properly situated for their prolongation. At the second

winter-pruning, whatever may be the length of their leading shoots, they must still be cut down to the stated height of fifteen inches and three quarters, each of them to two eyes chosen as aforesaid—one for the prolongation of the main branch, and the other for forming the first secondary branch. I have shown at *c* (fig. 7.) the point at which the pruning must be made in this case, which causes no other inconvenience than that of retarding the formation of the lower secondary branches for one year.

158. SECOND PRUNING.—*Third year of Planting.* Fig. 8 represents the state of the tree after the second year's growth. The two main branches, *A, A*, have increased in length; so also have the two first secondary branches, *B, B*. All the shoots and laterals which have grown on the sides of these four branches are pruned to two or three eyes; then the main branch *A* is pruned at about thirty-one inches and a half from the insertion of the secondary branch *B*, after having ascertained that there are eyes properly situated at a like height on the other branch *A*, in order that a symmetry as perfect as possible may exist between the two wings of the tree. This interval of thirty-one inches and a half affords facility in nailing the fruit-branches formed along the secondary branches, and allows a free play of air and light. The main branches *A* and *A* are pruned at *c*, each on a wood-bud, *a*, situated on the upper side; and having a second eye, *b*, situated on the under side, which is to become the second lower secondary branch. If there should not be a wood-bud properly situated for a leader, there is no objection to choosing one in front; but then, when it pushes, and as it proceeds in growth, it must be nailed so as to make it gradually take the right direction, because it has a tendency to grow outward. The two branches *B, B*, are then both pruned to the same length, about thirty-one inches and a half, in order that, when the four arms are nailed, the points of the branches on each wing may nearly touch a perpendicular line supposed to be drawn from the base of the wall to the coping. This would be the case if the tree, represented by fig. 8, where the cuts on the leading branches are seen at *c c*, were nailed; because the ultimate depression of the main branches would make the two points on each wing nearly touch the same vertical line.

159. Very often in trees of this age the vigor is such that nearly all the eyes on the leading shoot break forth; so that, at the time of pruning, laterals only are found on the shoot, especially at the height to which it ought to be shortened. In such a case, choice is made of a lateral situated on the upper side, with another immediately below it on the under side; and after having cut the principal shoot, the two laterals are pruned each on a wood-bud suitable for prolonging them according to their respective destinations. They are then regulated by nailing. The pruning of the main and secondary branches may also be effected either on a latent eye followed by a lateral—that is, having a lateral immediately below—or on a lateral followed by a wood-bud, according as they are found at the point where the amputation should take place. Disbudding and pinching are still employed according as they are needed.

160. THIRD PRUNING.—*Fourth year of planting.* The tree is unnailed, and shows the results of the third year's growth. I begin by examining the comparative state of each wing, so as to act accordingly. Supposing no unfavorable accident has occurred to the tree, I cut down all that are solely wood-shoots to two or three eyes, according



to their strength. All the fruit-branches that were pruned the preceding year are cut back to the lowest shoot, or to the successional nearest to the principal branch; and this successional is itself shortened to two or three eyes, according to its strength when it has no flowers; and when it has flowers it is pruned to the first wood-bud above the flower-buds. The laterals that it may be thought proper to preserve on the leading shoots of the principal branches must be pruned in the same way, and they are thus treated at every subsequent pruning. This done, we proceed to prune the three branches A, B, C, (fig. 11,) on each wing, commencing with the uppermost.

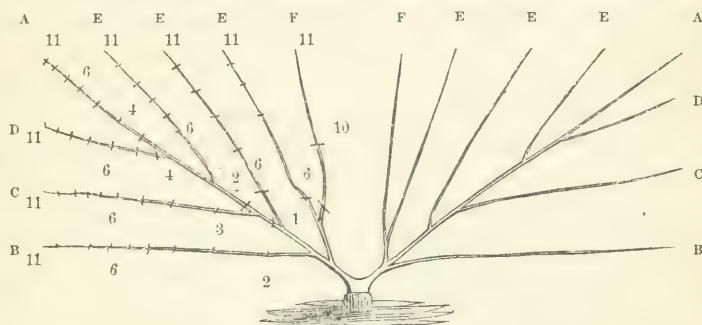


Fig. 11.

161. The two main branches, A, A, are pruned thirty-one inches and a half higher up than at the preceding pruning, and on an eye situated on the upper side, and which eye becomes the leading shoot. On the under side there must be an eye at the origin of D, which is intended to form the third lower secondary branch. After having thus operated on the two main branches, the two secondary ones, C and C, which must now undergo their first pruning, are next attended to. They are pruned at about thirty-one inches and a half from their base, on a bud situated as much as possible in front; the shoot from it afterwards receives its proper direction by nailing. The branches B and B are next pruned for the second time, and on a bud also placed in front, and thirty-one inches and a half higher up than the preceding pruning. It is necessary to remark, that, in order properly to constitute the lower secondary branches, they must be so pruned that their extremities exceed the perpendicular line supposed to be drawn where the end of the main branch touches when the latter is temporarily bent down with the hand. This excess of length should be greatest for the lowest secondary, and diminish to the highest. I should add, that, when a secondary branch is to be formed, it is always important to make the pruning, on the main branch, exactly at the proper point, where the eye immediately below it, which is to produce the secondary branch, may be placed at the proper distance for giving an equal space between the lower branches.

162. Immediately after the pruning is finished, the main branches are brought to a proper position, by bringing down each wing equally, so that the secondary branches may take a right direction. The requisite nailing of all branches is then completed.

163. As vegetation advances, the young shoots are successively nailed, commencing

at the upper part of the tree; for that part has always a tendency to make the strongest growth, and which tendency it is well to counteract by the greater or less amount of constraint that can be imposed by this operation. About the same time, the first disbudding takes place, and is followed by the pinching of all the over-luxuriant young shoots; and it is generally necessary, for the reasons above stated, to commence likewise these operations on the upper part of the tree. In short, we disbud when needful, and especially two of the shoots from triple buds on the upper sides of the branches; and all suppressions are made that the flow of the sap may render necessary for regulating and completing the intentions of the operations of winter-pruning.

164. **FOURTH PRUNING.**—*Fifth year of planting.* In our cultures at Montreuil, owing to the height the tree has attained, and the lowness of the walls, the formation of the lower secondary branches is now complete; but when the walls are high, a fourth lower secondary may be formed at this pruning, proceeding in the same way as for the other three which compose the frame-work of our trees. I will not treat further on this fourth branch, which seldom exists in our gardens, as I only wish to make known my own practice in conducting the square-trained Peach tree.

165. Fig. 11 (A, B, C, D,) represents the principal branches of the tree at this stage. After having examined, from top to bottom, the shoots and fruit-branches along the principal ones, and having pruned them as was done in the previous year, the pruning of the wood-branches is next to be considered.

166. The main branch, A, is brought down to the point it should occupy after nailing, in order to judge better where each secondary branch should extend. The branch A is now pruned for the fourth time, the branch B for the first time, the branch C for the second time, and the branch D for the third time; each of them to its proper relative height. As the formation of a secondary branch is no longer required, the branch A is pruned to a bud situated either on the upper or under side, or in front of the branch, according as it may happen to be at the most suitable distance.

167. Sometimes I do not find eyes on the principal branches sufficiently well placed at the winter-pruning. In that case I leave a portion of the shoot beyond the eye intended to produce the leading shoot, when that eye is situated lower down than the one on the corresponding branch, in order that after nailing no difference may be perceived. When the eye above which I have left this piece of branch begins to grow, I cut back to it, and I attend to the growth of the two relative extremities in order that they may become of equal length.

168. After having trained and winter-nailed the tree, lowering at the same time its four branches towards the position which they should finally occupy, vegetation soon commences; and during its course we must disbud, pinch, nail, disbud a second time, and use summer-pruning, according as these operations are required; performing all with the view to the equal distribution of sap. Particular care must be taken at the summer-pruning, to cut off all the snags, wherever they are found; because healing over is more readily effected at that than at any other period.

(To be continued.)

## STRAWBERRIES.

DURING the Strawberry season last year our artist, Mr. PRESTELE, made us drawings of a large number of Strawberries, taking average-sized specimens from beds in a very ordinary state of cultivation. We present a few in our frontispiece this month.

*Burr's New Pine*, originated at Columbus, Ohio, several years ago, by Mr. JNO. BURR, is a pale red, conical berry, of fine flavor. The plant is hardy, and an abundant bearer. Around Rochester it is extensively cultivated for market. It has not proved so valuable in other localities. It is quite early—very little behind the *Large Early Scarlet*. Flowers pistillate.

*Burr's Ohio Mammoth*, originated also by Mr. BURR, of Columbus, is a very large, roundish, light-colored berry, of tolerably good flavor, but frequently hollow. Makes a fine show in the bed or in a dish, but the crop does not bear many successive pickings, and on the whole it can not be recommended for general cultivation. Flowers hermaphrodite.

*Bicton Pine*.—A new foreign variety. Large, roundish, pale flesh color, with a reddish tinge on the sunny side; fragrant, and tolerably high flavored. A moderate bearer; desirable in an amateur's collection on account of its color. It is the largest and finest white Strawberry we have yet tested. Flowers hermaphrodite.

*Genesee*.—Originated three or four years ago by ELLWANGER & BARRY—a cross between *Hovey's Seedling* and the old *Duke of Kent Scarlet*. A large, necked berry, of a bright crimson-scarlet. Fruit-stalks very strong, bearing the fruit well up. The plant is one of the most hardy and luxuriant of any we know, and produces large crops. About equal in quality to *Early Scarlet*. We consider this a valuable variety. Rather late, and remaining in use longer than many others. Flowers hermaphrodite.

*Black Prince*.—A foreign variety, we believe. Large, roundish, of a very dark, glossy red. Quite distinct. Very good when well ripened in dry weather, but insipid in showery weather, or if gathered too soon. The plant is hardy, and uniformly bears enormous crops with us. Mid-season. Very different opinions have been expressed in regard to this variety, owing in great part, we believe, to the different states of maturity in which it has been gathered, as well as to the weather at the time of ripening. Flowers pistillate.

*Walker's Seedling*, originated by SAM'L WALKER, Esq., of Roxbury, Mass., is a medium-sized berry, regularly conical, and of a dark color, nearly as dark as *Black Prince*. The plant is tolerably hardy, and bears abundant crops. Flavor good. Flowers hermaphrodite.

*Monroe Scarlet*.—Another seedling, raised by ELLWANGER & BARRY. Medium to large size, roundish, light scarlet. Plant hardy, and an immense bearer. Flavor good. Has succeeded well in many localities. Flowers pistillate.

The Strawberry is so easily and quickly raised from seed, that new varieties are becoming numerous. The coming season we hope will enable us to test several which we regard with a good deal of interest. We hope those of our readers who have



opportunities of observation and comparison, will watch closely during the coming season, and give us the results; but we do not wish statements to be made regarding varieties unless their genuineness be unquestionable, for such information very often misleads the public.

## THE GARDENS OF THE BIBLE.

BY A. D. G

MAN was placed, at his creation, in a garden. This garden—or “paradise,” as in some parts of the Bible it is rendered,—was situated within another and larger domain called Eden. This whole region, as its name implies, was one of remarkable fertility and beauty. Its true site we are now unable to determine. The inhabitants of China, India, Ceylon, Persia, Syria, Ethiopia, and indeed of every quarter of the globe, have maintained, each for themselves, that the happy spot must have been within their respective countries. The Ceylonese, among others, point the traveler to ADAM’S peak, to the ruins of ADAM’S bridge and of ABEL’S tomb. Most learned critics, however, agree that it was situated in Armenia, between the sources of the four rivers, Tigris, Euphrates, Araxes, and Phasis.

But, whatever may have been its site, of this we are certain, that it was distinguished for the productiveness of its soil, and for the beauty of its climate and of its scenery. “Out of the ground made the LORD GOD to grow every tree that is pleasant to the sight, and good for food. \* \* \* And a river went out of Eden to water the garden.” Here our imaginations may have full scope to picture a scene of unmingled comfort and of perfect enchantment. The CREATOR planted this garden. What a paradise, then, it must have been! God laid himself out (be it reverently said) to store it with everything that could contribute to man’s highest enjoyment. What were the trees and plants of which the happy pair ate? Perhaps the Fig, the Orange, the Pear, the Peach, and the Vine, were among the number. What were the trees upon whose majesty or grace they looked, and under whose shade they reclined? Perhaps the Palm, the Oak, the Magnolia, the Cypress, the Cedar, the Pine, and Fir. Every breeze bore to them the fragrance of flowers, the songs of birds and the murmur of running streams.

“Out of the fertile ground [God] caused to grow  
 All trees of noblest kind for sight, smell, taste;  
 \* \* \* \* \*  
 \* \* \* the crisped brooks,  
 Rolling an orient pearl and sands of gold,  
 With mazy error under pendent shades  
 Ran nectar, visiting each plant, and fed  
 Flowers worthy of Paradise, which not nice Art  
 In beds and curious knots, but Nature boon

Pour'd forth profuse on hill and dale and plain,

\* \* \* \* \*

Groves whose rich trees wept odorous gums and balm,

Others whose fruit burnish'd with golden rind,

Hung amiable, Hesperian fables true,

If true, here only, and of delicious taste:

Betwixt them lawns, or level downs, and flocks

Grazing the tender herb, were interspers'd,

Or palmy hillock; or the flowery lap

Of some irriguous valley spread her store,

Flowers of all hue, and without thorn the Rose."

Among the trees of this garden was "the tree of life," and "the tree of the knowledge of good and evil." Of the first, in addition to its spiritual import, it is supposed that it was an evergreen tree, flourishing continually with leaves and fruit. It grew nowhere except within the garden; for it is mentioned as a reason for man's expulsion therefrom, "lest he should put forth his hand and take of the tree of life." Of the second, we know only that it was appointed to serve as a test of man's obedience. In this garden man was placed, "to dress and to keep it"—that is, to cultivate and to beautify it still further. A high trust and privilege, surely, it was to have charge of such a paradise! How long ADAM held possession of this happy abode, we do not know. How long the trees waved in their glory, and the flowers diffused their fragrance, and the soil yielded its return to man's easy labor; how long before the thorn and thistle were seen shooting up from the ground, and frost and blight and untimely storms and burning suns turned that garden into a desert, we are entirely ignorant: but that such a time came, and all too soon, we have abundant evidence.

The Bible contains but few special notices of the gardening of the Hebrews, or of other contemporaneous nations. In the early ages of the world, when men seem to have led a somewhat migratory life, little was done in the way of tilling the soil beyond what was necessary for the immediate wants of the inhabitants; and in the climate of Eastern Asia, abounding in so many spontaneous fruits, but little labor was required. When, however, men became established in permanent homes,—as, for example, the Jews in Canaan,—they at once began to cultivate their fields and to plant gardens with much care.

JACOB had a garden in Hebron, from which at one time his sons gathered "a little balm, and a little honey, spices and myrrh, nuts and almonds," as a present for the Governor of Egypt. SOLOMON had a garden in Jerusalem. It was situated on the eastern side of the city, just without the walls, between Mount Zion and the brook Cedron. Of its size we have no certain knowledge, though, if we may judge from the number of trees and plants grown within it, it must have been large. It was square, and surrounded by a high wall. Its proprietor was quite a botanist, for his time; and, having immense wealth at his command, stocked his grounds with things rare and beautiful, as well as with those that were simply useful. There was "the Hyssop\* which springeth out of the wall;" "odoriferous and showy flowers, as the Rose, the

\* Supposed by many to have been a species of moss.

Lily of the Valley, the Calamus, Camphor, Spikenard, Saffron, and Cinnamon; timber-trees, as the Cedar, the Pine, and the Fir; and the richest fruits, as the Fig, Grape, Apple, Palm,\* and Pomegranate."—*London*. It was also watered by wells and running streams. NABOTH had a vineyard in Samaria, adjoining the palace of AHAZ. He must have been a very good gardener, or his king a very covetous man; for it appears that his purple clusters looked so tempting, from AHAZ's windows, that the king could not restrain his desire to get possession of them. AHAZUERUS had a garden near his palace at Jerusalem, whither he often went to refresh himself; but of its size or products we know nothing.

It is evident that the garden among the Hebrews, as throughout all the East, was a place of more frequent resort than it is with us. It was fitted up with arbors embowered in vines, and with aviaries and seraglios (or tasteful cottages); and streams of water were conducted through it, both for use and beauty. It was resorted to less for exercise than for rest and enjoyment; the climate of that country rendering desirable a place for repose, a quiet spot sheltered from the sun by broad-leaved trees and clustering branches, amid which to breathe the fresh air, to view the landscape, to hear the song of birds and the sound of running water. The Bible is the only book from which we can learn how the Hebrew managed his farm and garden; and the information from this source is somewhat scanty. This, however, we know, that in his fields he grew Wheat, Rye, Barley, Millet, Vetches, Lentils and Beans; and in his garden he raised Cucumbers, Melons, Almonds, Pomegranates, Olives, Figs, Grapes, Gourds, Onions, Garlic, Anise, Cummin, Coriander, Mustard, and various Spices; to which may be added many flowers, whose names the Bible does not record. He raised in his garden what his climate especially required for his comfort and health—juicy, cooling fruits, to assuage his thirst; spices and fragrant herbs, to regale him with pleasant odors; and wine, to refresh his spirits.

Before leaving this part of the subject, it may be worthy of remark, as showing the horticultural knowledge of MOSES, that he forbade the Hebrew to ripen any fruit on the Vine and Olive for the first three years after they were planted, so as to enable them to become mature and thrifty.

When the sacred writers would speak of a state or condition of the Jewish people much to be desired, they often represent it by such figures as, "Sitting every man under his own vine and fig-tree, with none to molest or make afraid," &c.; thus indicating, it would seem, that in the mind of a Hebrew the peaceful ownership of a garden was among the highest of earthly felicities. And in ABRAHAM's purchase of "the field of Ephron, with the cave, and all the trees that were in the field," and in the frequent burials amid groves of Oak, mentioned in the Bible, may we not see how

\* The more careful writers of the present day hold that the Rose of modern gardens is not once referred to in the Scriptures, though it is not doubted that it was well known in the earliest ages of the world, and had a place in every garden of the Bible. The Lily of the Valley was not the humble plant which appears in our borders, but a large flower growing wild in Palestine, especially in valleys. The "Lilies of the field," between which and SOLOMON'S attire CHRIST drew a comparison, was, it is supposed, a red Lily; and, as the royal robe was purple, such comparison was beautifully appropriate. The fruit referred to in the Bible under the name of the Apple, is now commonly supposed to have been the Citron.



greatly the Hebrew delighted in trees as a protection and shade for his last resting-place?

But, leaving the gardens of the Old Testament, let us pass to those of the New. The garden of GETHSEMANE was a grove in the outskirts of the village of Gethsemane, on the western slope of the Mount of Olives. It was a pleasant retreat from the noise and heat of the neighboring city, Jerusalem; and here our SAVIOR frequently resorted with his disciples. Amid these shades he suffered great agony of mind, on the eve of his crucifixion; here an angel descended to comfort him; and here he was betrayed. History informs us that TITUS cut down all the trees in the neighborhood of Jerusalem, including those in Gethsemane; but the Olive and some others sprang up again, and trees of this description have continued to thrive until the present day, in this their ancient locality.

Our SAVIOR was buried in a garden, in the suburbs of Jerusalem. The city was surrounded with pleasure-grounds of various kinds; and as the soil was much broken with huge masses of projecting rock, the Jews often turned them to good account by cutting family vaults in them. It was in one of these tombs, which JOSEPH of Arimathea had prepared for himself, in his own garden, that CHRIST was interred. The funeral took place just before sunset of Saturday, early in April, just as all nature was reviving after the sleep of winter.

The future state of the righteous is often spoken of in Scripture under the figure of a garden. It is three times called a "paradise." It is also represented as a place of rest, where the inhabitants shall be shielded from the oppressive light and heat of the sun, and be refreshed by living fountains of water. And as though Eden were again restored, we are shown "a pure river of water of life, clear as crystal, proceeding out of the throne of God and of the LAMB; and on either side of the river, is the tree of life, bearing twelve manner of fruits, and yielding her fruit every month, and the leaves of the tree are for the healing of the nations."

Such are some of the gardens referred to in the Bible. In his primitive state, man's home was a garden. And in all his subsequent history, the peaceful culture of the soil has contributed largely to his happiness, being "the inclination of kings and the choice of philosophers," as well as of those in humbler walks of life. In a garden the SAVIOR instructed his disciples, and there he was betrayed; in a garden he made his tomb; and in a garden fairer than that of Eden, whose fruits and flowers shall never fail, and whose leaves shall be always green, the good shall be gathered at last, and remain forever more.



## Foreign Notices.

**PRUNING ROSES.**—The introduction of a wood-cut of a closely-pruned Rose in last year's Almanac, induced some subscribers to ask for more information which it seemed to foreshadow; we therefore present the following general instructions. It is, however, hoped that the practical



Fig. 1.



Fig. 2.

ideas will be of such assistance to the amateur, as to prevent the all-but fatal operations generally performed under the above title; neither can an attempt be made to particularize the treatment necessary for the several families; their growth, to which our subject alone refers, will be readily comprehended by the terms luxuriant or short growing, and tender. Budded Roses when received from the Nursery are generally one year old, and during the first season the knife must be sparingly used; but after all chance of severe frost has disappeared (early in April,) the branches should be cut back to four or five eyes, having previously cut out all growth that interferes with the shape the sketches illustrate, being especially careful in performing the former operation, to cut to an outer bud. The following illustration (fig. 1,) of a budded Hybrid Perpetual, when received from the Nursery, shows, by the marks, where the knife is to be used; and further to exemplify the great advantage of adhering to this principle, the next sketch (fig. 2,) shows the results, after the first pruning, where it has been attended to and where neglected; the single lines showing the former, and the dotted the latter.

During the following October, any shoots which started in the center of the head, or any cross branches, may be entirely removed; but the shortening the branches leave till April, as the bud to which the branch is cut may be destroyed by frost, &c.; this would necessarily produce the very growth these directions, when attended to, will prevent.

With erect-growing varieties, as *Mrs. Elliott* (H. P.), *Mlle. Armé*, &c., the shape of the plants, when young, may be often much improved by ligatures, training the branches into a more outward direction.

In shortening the shoots of the majority of Hybrid Perpetuals, four or five eyes should be left; but when of luxuriant growth, as *Louis Bonaparte*, &c., shorten the branches to about half their length, and with the more robust summer-blooming varieties, take off about one-third only, keeping the center of the head well-

thinned; any thing like short pruning, with such subjects, being productive of abundant wood and scanty blossoms.

In the short-growing Hybrid Perpetuals and Bourbons two or three eyes are sufficient to be left; in the tender Tea-scented and Chinas, all weakly growth should be removed, and the shortening the branches must be performed with care; and, as in several varieties the eyes are far apart (recollecting the previous directions,) the amateur must use his own discretion.

Dwarf, Moss, and Provence Roses can scarcely be pruned too severely: the Persian Yellow,

and the other Austrian Briers too slightly, as not more than about an inch of the point of the shoots must be removed, as these varieties bloom only on wood of one year old.

Before concluding, it may be remarked that summer-pruning is often desirable, and frequently saves much trouble. This may be effected to a great extent by cutting the blossoms for ornament, or when decaying; and several varieties, such as Hybrid Perpetuals *William Jesse*, *Duchess of Sutherland*, &c., will, by reducing a moiety of their branches to one half their length in July, be much more certain to give autumnal blossoms; besides which, much unseemly growth may be easily checked when in a young state; and it may be, in conclusion, remarked, that the form it is most essential budded Roses should assume is that of an expanded inverted umbrella, which insures the perfect ripening of the wood, and consequent certainty of bloom. Supposing these operations are to be performed on wood one year old, the pruning scissors and a knife are all the tools required; where older wood is to be removed, a double-toothed *key-hole* saw will be requisite, not neglecting to make clean cuts with the knife after wounds made by either of the other instruments. — *Edwards' National Almanac, England.*

THE GENUS *KALOSANTHES*. — Some of the species of this genus are among the most showy and fragrant of summer-flowering plants, and they deserve to be more generally cultivated than they have hitherto been. The magnificent specimens annually produced at the great metropolitan exhibitions in July indicate the capabilities of the genus, and good plants are frequently produced far from the scene of these meetings. I doubt, however, whether any genus equally deserving attention is so commonly neglected or mismanaged by country gardeners as this. With a little care the flowers remain in perfection for some six or eight weeks, and the plants will be found exceedingly useful in the show-house, to take the place of the *Azalea* when the beauty of the latter is over.

Young plants intended for specimens should be dwarf and bushy, with strong well-ripened wood; those that may have been wintered in a soft, half-growing state, should be rejected, as it is difficult to get them to break freely or grow vigorously. Place them early in March in a mild, growing temperature, of from about 45° at night to 60° with sunshine. The shoots must be stopped or cut back, as may be necessary to insure a compact, bushy growth; and young branches will be produced much more freely, if two or three pairs of leaves are removed from the points of the shoots; and this should always accompany stopping. If the roots are abundant and active, shift into pots two sizes larger than those the plants are in; but first see that the ball is properly moist, and be careful to have the soil to be used in the same condition. Nothing is more likely to cause failure than neglect of this. The side-shoots should be tied out, keeping them near the surface of the soil. Keep the atmosphere rather close and moist, and water carefully till the roots start into the fresh soil. When the plants have broken, and are fairly started, the temperature may be increased to about 55° at night, and from 65° to 75° with sunshine. This high temperature must not, however, be maintained without a free circulation of air; for the *Kalosantes*, like most Cape plants, very much dislikes a stagnant atmosphere, and it requires all the light which can possibly be afforded it: therefore admit air freely, and keep the plants near the glass.

In May, or as early as warm weather sets in, they may be removed to a cold frame, where, with a little care, they can be kept sufficiently warm, and where the conditions most conducive to vigorous growth will be readily supplied. Air should be freely admitted whenever the state of the external temperature will permit. Although a stagnant humid atmosphere is injurious, with a circulation of air it can not be kept too moist. If they stand on a bed of coal ashes, this should be watered on the mornings of bright days, and the plants sprinkled over head towards evening, leaving a little air on during night, and a thin shade should be thrown over the glass during the forenoons of bright days, but use this sparingly. A liberal supply of water will be necessary while the plants are in active growth, but give them no more than is requisite to keep the soil in a healthy moist state; and when the pots are moderately well filled with roots, manure-water in a clear weak state may be used with advantage two or three times a week.

The treatment of the plants after midsummer must be regulated by the size of the specimens



desired. To produce large flowering plants, such as that represented in the accompanying wood cut, it will be necessary to grow them two seasons, and in this case they should be stopped and potted early in June, as they may have filled their pots with roots. Have an eye to the formation of compact dwarf specimens, and stop and cut back as freely as may be necessary to



secure this; for they break freely, and there is no danger of injuring them by stopping or cutting back. If plants to produce about a dozen heads of bloom each are all that is wanted, with good management this may be secured by one season's growth; but if large specimens are desired, it will be necessary to grow them two seasons. Plants intended to flower the following spring should receive a rather large shift at the beginning of the season, and must neither be stopped nor potted after the end of June. It is easier to produce large handsome specimens of *Kalosanthes* than to have well-flowered plants; and unless the wood is thoroughly ripened previous to winter, it will be useless to expect a fine display of blossom. The necessary maturation of the wood can be effected only by subjecting the plants to full exposure to air and sunshine, and keeping the soil in a rather dry state. This change of treatment must be introduced very gradually; but if a fair amount of flower is expected, the plants should be inured to it by the middle, or at latest the end of August.

Those that were repotted may be treated less hard during autumn; but care must be used to get the wood of these well ripened before winter. If they can be placed near the glass in a house where Grapes are preserved during winter, they will be suited perfectly; and as they require very little water at the root, they will be less injurious there than most plants.

The best situation for the flowering plants during spring is the front shelf in the greenhouse. They should be kept freely exposed to air and sun; and after the appearance of the flowers, the atmosphere can hardly be kept too dry. A moist stimulating atmosphere promotes growth; and the effect of this would be an unsightly lengthening of the stems, an occurrence by far too common. When the flowers assume their proper colors, remove them where they can be kept dry, cool, and shaded from the sun.

Plants intended for large specimens should be stopped and potted in March, and treated as already recommended for specimens intended to flower the following spring.

Propagation is easily effected. I generally select firm young shoots with several branches, and plant them in 4-inch pots in sandy peat, placing them in a close pit, carefully shading them till rooted, which will be in about a month. As regards soil, this should be light but rich; half turfy sandy loam and half fibry peat, with a liberal allowance of sharp silver-sand and small potsherds, broken bones, or charcoal, will be found a suitable compost. Strong tenacious loam had better be avoided, or at least used very sparingly. The peat and loam should be broken up into pieces about the size of a nut, and intimately mixed with the sand, &c., previous to use. Secure perfect drainage by placing plenty of potsherds, properly arranged, in the bottom of the pots, covering with some rough fibry pieces of peat, so as to prevent the soil being washed down among them.—*J. B., in Florist, London.*

## Editor's Table.

THE AMERICAN POMOLOGICAL SOCIETY.—We desire to call the particular attention of nurserymen and fruit growers to the following circular, issued by President WILDER on the 1st of April. The meeting, it will be seen, is to be held simultaneously with the annual autumn exhibition of the Massachusetts Society. This strikes us an excellent arrangement, not only because the time (13th to 19th of September,) is a convenient one to a large majority of those who will be likely to attend, but because it will afford them an opportunity, without consuming extra time, to witness the magnificent display which the Massachusetts Society never fails to make on these occasions.

No city in the United States offers so many attractions to persons interested in Pomology and other branches of horticulture, as Boston. There we find every department—fruit culture, floriculture, the construction of dwellings, and the embellishment of gardens, all in the highest and most perfect condition to which they have yet attained on this continent. There we find genuine gardening taste and skill and enthusiasm, such as we cannot find elsewhere. There will be an immense meeting at Boston, both on account of the attractions to which we have alluded, and of the deep and general interest taken in the subject in all parts of the country.

During the two years last past, the number of persons interested and actually engaged in fruit culture in this country must have been more than doubled, we think, and information is greatly needed and no less keenly sought for. We trust that practical, observing men, in all parts of the country, will aid in promoting the objects of the Society, as set forth in this circular. No time is now to be lost in making notes for the season, and collecting such information as committees will be expected to furnish. We shall publish a complete list of the State committees as soon as we can learn their names.

In this connection we must also call attention to some excellent suggestions in the communication of an esteemed correspondent, which will be found on another page. The results of such meetings depend very much upon the manner in which the proceedings are conducted, whether they be satisfactory or not. The men who will attend them are generally working men, who can but ill afford to be away from home, and as a matter of course they desire not to lose time in profitless remarks or discussions, but that every moment be turned to the best possible account.

“AMERICAN POMOLOGICAL SOCIETY.—The Fifth Session of this National Association, will be held at Horticultural Hall, in the city of Boston, Massachusetts, commencing on Wednesday, the 13th day of September next, at ten o'clock, A. M.

It is intended to make this assemblage one of the most interesting that has ever been held in this country, on the subject of Pomology. All Horticultural, Agricultural, and other kindred Associations, of North America, are therefore requested to send such number of delegates to this Convention, as they may deem expedient.

Pomologists, nurserymen, and all others interested in the cultivation of good fruit, are also invited to attend the coming session.

Among the objects of this Society, are the following:—

To ascertain from practical experience, the relative value of varieties in different parts of our



widely extended country. To hear the Reports of the various State Fruit Committees, and from a comparison of results, to learn what fruits are adapted to general cultivation; what varieties are suitable for particular localities; what new varieties give promise of being worthy of dissemination; and especially, what varieties are generally inferior or worthless, in all parts of the Union.

In order to facilitate these objects, and to collect and diffuse a knowledge of researches and discoveries in the science of Pomology, members and delegates are requested to contribute specimens of the fruits of their respective districts; also papers descriptive of their art of cultivation; of diseases and insects injurious to vegetation; of remedies for the same, and whatever may add to the interest and utility of the Association.

The Massachusetts Horticultural Society has generously offered to provide accommodations for the Society, and also to publish its proceedings free of expense.

All packages of fruit intended for exhibition, may therefore be addressed as follows—'For the American Pomological Society, Horticultural Hall, School Street, Boston, Mass. ;' where a Committee will be in attendance to take charge of the same.

All Societies to be represented, will please forward certificates of their several delegations, to the President of the American Pomological Society, at Boston.

MARSHALL P. WILDER, *President.*

H. W. S. CLEVELAND, *Secretary.*

A ROSE-GARDEN UNDER GLASS.—The most luxuriant growth of Roses we have seen in a long time, was in the houses of Messrs. RYAN & Co., where the plants are set out in borders as in the garden. Hybrid Perpetuals and Bourbons are growing up into miniature trees, and producing immense clusters of large flowers—so different from the plants cramped up in pots, as to seem not to belong to the same family. Whoever would enjoy a Rose-garden in April, in our northern climate, should take a hint from this. A Rose-house of this kind might be so constructed as to require little, if any, artificial heat during winter.

SEEDLING CAMELLIAS.—Mr. R. ROBINSON SCOTT has sent us a box of Camellia flowers from seedlings raised by the late J. B. SMITH, of Philadelphia, and now held by Mr. DAN'L BOLL, of New York. The flowers were much withered and discolored, so that no accurate opinion of their merits could be formed. There appears to be ten varieties, several of them very distinctly striped. One is a very dark purplish crimson, with well defined light stripes; and one a very pale flesh color, nearly white, with deep rosy stripes. All, with one exception, are well formed. We should be glad to see them in a more perfect state.

THE SEASON.—Up to this time, April 25th, the spring over a great portion of the country has been remarkably cold and backward. The 22d was the first really spring-like day we have had in this region since the 15th of March. Bulbous roots and border plants that were uncovered early have suffered much, but the fruit buds are safe, and promise at this moment an abundant crop. In many places north and west we learn that all hopes of a crop are gone.

ANOTHER NEW BOOK DESTROYED BY FIRE.—A new work on Rural Architecture, by GERVASE WHEELER, Esq., the author of "*Rural Homes*," was destroyed by a late fire in New York, just as it was ready for the press. The loss is a serious one, not only to the author, who had spent much time in its preparation, but to the public. We are happy to learn, however, that he has gone to work anew, and we hope soon to have the pleasure of announcing its appearance.



NEW AND RARE PLANTS.—*HEINTZIA TIGRINA*. Nat. Ord. *Gesneriaceæ*.—This desirable gesneriaceous plant is figured and described by Dr. PLANCHON, in the 7th volume of the *Flore des Serres*. As this tribe of plants is, generally speaking, well suited to our conservatories, and many of the species of *Gesneria* already introduced have been found valuable additions to the hot-house, easy of cultivation, and propagated with facility from the leaves, we have translated the following description of this showy plant:—

"*Heintzia tigrina* was found by M. KARSTEN, in the shady mountain forest of Caracacas, at 5000 feet above the level of the sea. It forms an under shrub, (*sous arbuste*) with spreading branches, from four to five feet high, slightly quadrangular, ornamented with fascicles of flowers, enclosed in a rose-colored calyx, which proceed from the axils of the large leaves. The corolla is beautifully dotted with purple on a white ground. Though resembling *Alloplectus* in appearance, as well as in the calyx and fruit, this genus is distinguished at once from that family, as well as from all analogous genera, by the absence of a large hypogynous gland on the posterior side of the base of the ovary. Its habit, calyx, and form of corolla, separate it from *Drymonia*, the only genus of the order with a free ovary, which, as well as the *Heintzia*, has no trace of a fifth stamen. It flourishes and ripens its seed in a humid and warm atmosphere, flowering in the summer months, and ripening its seeds in the comparatively dry season which forms the winter of that region."

We have been obliged to abridge the interesting details furnished by the editor of the *Flore*.

*AQUILEGIA GLANDULOSA*. Nat. Ord. *Ranunculaceæ*.—This newly introduced perennial herbaceous plant is one of the most attractive of its class. The outer petals are of a bright blue color, and the appendages white, very delicate and showy. It is quite a new form of *Aquilegia*, and a decided acquisition. We observed it in bloom in the greenhouse of H. A. GRAEF, Brooklyn, L. I., who was the first, we believe, to introduce it to this part of the country. All who admire choice herbaceous plants will be pleased with it. It will prove easy of cultivation, as are all the species of this old and well known family, so familiar by including the Columbine, a favorite garden flower.

AGRICULTURE AND HORTICULTURE IN CALIFORNIA.—We have received the third number of the *California Farmer*, published at San Francisco, California. From this number we glean several interesting items.

The Committee on Agriculture have introduced a bill into the Legislature to establish a State Agricultural College; and also to aid the State Agricultural Society. California is getting the start of many of the old States.

The Californians laugh at the reports of large crops to be found in the agricultural papers here. After giving the premiums of the New Hampshire State Society, at which a premium was awarded for 30 bushels of wheat to the acre, and 50½ bushels of barley, the *California Farmer* asks: "What would California Farmers say to 30 bushels wheat to the acre? and what would New Hampshire farmers say to our crops of 150 bushels barley to the acre?"

This seems rather impertinent for so young a member of the family; but when we look at their reports of enormous crops, and vegetables of such a size as to make the statement seem almost fabulous, there is some excuse for the contempt with which Californians look upon *our* reports. We copy a few items from the Report of the Committee of an Agricultural Exhibition at San Francisco:—

"From Dr. SAM'L MURDOCK, San Jose, Mission land—Seven sacks potatoes, 12 bushels, the product of three potatoes.

RAY & JACKSON, San Francisco—One large and splendid beet, 36½ pounds.

From JOHN SEYDAM, American River, Sacramento—Three sugar beets, 13, 16, 14 pounds; one blood beet; two fine Russian turnips. The beets were planted June 10, harvested Oct. 3d.

From G. T. PIERCE, San Francisco—One potato, raised in Pajaro Valley, weighing 5½ pounds.

From S. BRYANT HILL, Pajaro Valley—Three onions, weighing 9 pounds, one measuring two feet in circumference.

From J. M. HORNER, San Jose—Four fine squashes, 87, 70, 61, 35 pounds; one drumhead cabbage, 25 pounds; five cabbages, of five varieties; two specimens potatoes, 3½ pounds each.

Col. J. T. HALL, Sacramento—One blood beet, of surpassing size, weighing when lifted from the ground 65 pounds, and when cleared of leaves and on exhibition 52 pounds, after it had been out of ground some time."

The Committee say, in their report, "It would be difficult to make persons in the old States realize what was actually exhibited in the Hall. They must have been seen to have been believed."

The Greenhouses of the Messrs. DONELLAN, of Hanford's Landing, were totally destroyed by fire a few weeks ago; and all their hot-bed sashes, and implements in an adjoining building, were also destroyed. We sympathize with these worthy gentlemen in their misfortune. They will re-build immediately.

SUGGESTIONS FOR THE NEXT MEETING OF THE AMERICAN POMOLOGICAL SOCIETY. — The next meeting of the American Pomological Society is to be held at Boston, in the autumn of the present year. It is desirable that all who have the objects of the Society at heart, should remember it in time, and endeavor to collect and arrange all the information in their power during the coming season. Past experience should teach the means of more efficient future action; and that it may do so, it will be well to recur to the proceedings of former sessions, not for the mere sake of finding fault, but to learn how to avoid faults hereafter. The importance of the subject is sufficiently evinced by the fact that its discussion has called together, on every occasion, so large and intelligent a body of men from every section of the Union, as well as the British Provinces. The labor and cost of these assemblies have fallen heavily upon the members, but no shirking or shrinking have ensued. No similar body of men will ever assemble with a readier will to work; and it will be much easier for their successors to carry out their plans, than it was for them to collect and digest the materials of which those plans are the result. The machine is made and put together, and started. Henceforth it needs only to be kept oiled and free from clogs.

The greatest bar to efficient action heretofore, has been the want of such system as would prevent loss of time. When two or three hundred men assemble for a specific purpose, at intervals of two years, many of them performing long journeys for the purpose, and then devote only two or three days to the work they have to do, it is obvious that time is the most precious commodity they have to deal with. The five minute glass should occupy a conspicuous position on the speaker's desk; and, to be justly emblematic, its sands should be of gold. So far as material arrangement is concerned, nothing could be better than was provided at the last meeting. Every convenience for the exhibition of the fruit, the comfort of the members, and the accommodation of the committees was provided by the Pennsylvania Horticultural Society. Some of the contributors, however, were guilty of a provoking omission in neglecting to label their fruits. Every one who sends fruit should have a list to give to the Secretary, and a label for every specimen prepared before hand. But the great loss of time has been occasioned by the number of unnecessary words. This has not been an intentional fault. Considering what have been the occupations and habits of most of the members, it is rather surprising that the general style of speaking should have been so good, and so much to the point as it was; and there were many striking illustrations of the fact that good common sense, even under a rough

exterior, is worth more than a polished style without a basis of sound judgment. But every one will acknowledge the fact that a great deal was said which was of no use or interest; and it is not surprising that those who appreciate the importance of the work, should be somewhat restive under an infliction of dullness, whose background is not even relieved by the comfortable prospect of eight dollars a day, but which, on the contrary, must be paid for out of their own pockets.

The "order of business," according to the bye laws adopted at the last meeting, is as follows:

1. CREDENTIALS OF DELEGATES PRESENTED.
2. ADDRESS OF THE PRESIDENT.
3. ELECTION OF OFFICERS.
4. REPORTS OF STATE FRUIT COMMITTEES
5. NEW BUSINESS.

The performance of the three first named duties, with the arrangement of the fruit for exhibition, will be as much as can reasonably be hoped for the first day. The second day would therefore begin with Reports of State Fruit Committees. These reports are exceedingly interesting documents for study or reference, but are too long to be read to the meeting, and have heretofore been passed to the Secretary, to be published in the record of proceedings. Next comes "New Business," which means anything connected with horticultural matters which any member chooses to bring forward, and consists generally of discussions of the characteristics of different fruits. This, therefore, is the most interesting and practically useful part of the proceedings—the part in which every speaker should be most concise and directly to the point—the object being simply to elicit facts. It so happens, however, that many of the most thoroughly practical men, who possess the richest store of facts, are the ones who are most diffident, and have least fluency of speech. It were to be wished that every one would remember that the assembly at such times is simply a court, before which they are only witnesses for or against the character of the fruit under discussion. If they know anything bearing upon the case, which is not already sufficiently proved, let them say it in as few words as possible; if they know nothing, let them be silent. If, however, every member would bear in mind, during the coming summer, that he is to appear as a witness next autumn, and would take pains to note down, at the time, every item of evidence which falls under his observation, and have his notes at hand for reference when the subjects come up, it would greatly facilitate business and give much more force to the final decision, than if each one depended on memory alone. It is to be hoped that this plan will be generally adopted.

Nothing would be of more essential value than accounts of carefully conducted experiments, tending to elucidate new facts or decide disputed points. But the fact is, there are few men who are capable; or, if capable, who have the time and opportunity for conducting horticultural experiments in such a manner as to arrive at conclusive, or even very reliable results. So many elements are involved, and these elements are subject to such an infinite variety of changes, that it requires keen observation, sound judgment, and untiring patience, to carry out any really important experiment in culture. It is not to be done in one year, and may require the coöperation of several parties. Unless it is thoroughly performed, it is worse than useless; for it may lead to wrong conclusions, and, enlisting party spirit on its side, bar the passage to correct investigation. If any one doubts either of the above assertions, let him begin the perusal of all that has been written on the "Strawberry question," and report his opinion after he is through. Still, it is to this source that we must look for the most valuable results; and the Pomological Society could in no way more effectually advance its objects, than by instituting a series of experiments, to be conducted at different points, under the superintendence of Committees, who should report at the biennial meetings. The results of such experiments would have much more weight than those arrived at by an individual; but it is doubtful whether the Society is yet in condition to undertake them, and meantime every individual report is of value.



At the former meetings of the Society, it has been customary at the outset to appoint a Committee to examine and report upon new fruits—a most important duty, and one which has called for the services of the best horticulturists, whose names may be found on the lists of that Committee. The effect has been to banish those men to a side room on several occasions when their voices and votes would have been most valuable in the general assembly. This is an evil which might be remedied; and it is for those who take the lead to think of such things, and make such arrangements as will prevent their repetition.

So far as can be judged from present appearances, the coming season will furnish abundant means for collecting such information as will make the next meeting an exceedingly interesting one. The horticultural journals ought, therefore, to “keep it before the people,” and every one should exert himself to the utmost to contribute to the fund which is for mutual benefit.

AN OFFICER.

THE Season has been, and still is, a trying one for fruit trees. December, up to the 26th, was mild. Winter then set in with cold and snow, and from that time to March 1, every week possessed the peculiar phases incident to one part of extreme cold and another part thawy. The changes were frequent and severe, the mercury sometimes sinking 40° in twenty-four hours. The effect on Peach and other delicate buds can not be mistaken. From March 5th to the 17th, there was every appearance of the coming of spring; the temperature was so mild that the snow was gone, except in cold localities, the frost nearly out, and in many places the ground getting dry; birds were singing in joyous melody, frogs commenced the serenading of spring, wild geese and pigeons passed by to the north. On the night of the 17th the wind changed suddenly from S. W. to N. W., and the howling set up by old Boreas was of any but an amusing or agreeable character. His cold breath, as it fell upon the earth, undid all that the previous warm days had accomplished; and he blew so furious a blast through the 18th, that there was no sign of thawing that day. The wind was not so high in this vicinity, however, as at many places east and west of us, and but very trifling apparent damage was done. The morning of the 19th, the mercury stood at 6°, and a cold day followed. Indeed, the weather has been severe to the present time. Had the same clouds floated through the atmosphere, and the same winds raged in their fury during the short days of December, that month would have been memorable for its severity. Now, the latter half of March must claim supremacy as affording an atmosphere the most revolting to man and beast of any time of the same number of days of the past winter. How far this out-of-place severity will extend into spring, is yet to be known; but we hope the north wind has labored so long and strongly for the last ten days, his breath is nearly spent, and that his icy reign will be followed by more gentle but enduring breezes from the warm southwest. W. BACON.—*Elmwood, Richmond, Mass., March 28.*

SEEDLING APPLES.—I inclose you a small sample of a dried Apple, which you will see is quite remarkable for its whiteness. [Almost as white as snow.—Ed.] I received it from Mr. L. NORRIS, of Windsor, Ohio, who assures me it was dried in the usual way. It is the product of a seedling Apple which is remarkable for this peculiarity—of retaining almost a snowy whiteness when dried. It cooks tender, and altogether must be a very desirable variety for this purpose, as it is also quite a good eating Apple. I have thought it worthy of a notice in your journal, and therefore copy Mr. NORRIS' remarks upon it in his letter covering the scions which he very kindly sent me. He names it *White Beauty*, and adds:—“It is a native of the Township of Windsor, Ashtabula County, Ohio, where the original tree is now growing on the farm of S. A. LATHROP. Its fruit is very highly esteemed by all who have tested its value, for all culinary uses. It differs from all other Apples we have seen, in the *beautiful whiteness* it retains when dried, and its tenderness in cooking. The fruit is of medium size. Form—globular, with a smooth and regular surface. Color—dull greenish, dotted with greyish specks. Stem—

medium size, three-fourths of an inch long, set in a shallow and regular cavity. Calyx—in a broad, open, not deep basin. Flesh—white, tender, and juicy, with a sprightly subacid flavor. In season from September to December. Mr. NORRIS omitted to speak of the nature or habit of the tree; but, judging from the scions received, should think it a vigorous grower, with dark-ish shoots dotted with greyish specks.

The *Jacksonian* is another seedling Apple of the same town, and was raised on the farm of the Rev. JOHN NORRIS, one of the "old settlers" of the place, and a great admirer of Gen. JACKSON. Hence the good old man christened his favorite Apple after the hero. Mr. L. NORRIS speaks of it as an excellent winter Apple, and describes it of medium size. Form—roundish, with the surface a little irregular and undulating. Color—a rich yellow ground, striped and splashed with a fine clear red, which on specimens exposed to the sun prevails and assumes a beautifully dark hue. Stem—short, set in a deep cavity. Calyx—in a deep basin. Flesh—white, splashed with bright red, crisp and juicy. In season, from December to March.

The same town boasts of yet another seedling Apple—a choice sweet one. The seedling tree is growing in the same orchard with the *White Beauty*. Mr. NORRIS speaks of it as having a rich honey-sweet taste, and thinks it stands quite unrivaled for making preserves or apple butter. It has received the name of *Honey Sweet*.

From the interest Mr. NORRIS takes in disseminating choice seeds, &c., I have no doubt he would cheerfully supply sample scions of these fruits to those who might properly apply for them. T. E. WETMORE. — *North Cannon, Michigan.*

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MR. MATHEWS' CURCULIO REMEDY TO BE TESTED THIS SPRING, BY COMMITTEES. — Having received a letter from Hon. JAMES MATHEWS, of Coshocton, Ohio, requesting me to act as an agent for him in the Eastern States, with reference to his Curculio remedy, and having given my consent to act in that capacity, I now give notice that he has communicated said remedy to me, and that I am a duly authorized agent to have committees appointed, and before them to test his Curculio remedy the coming spring. With this view, therefore, I have written to the officers of the Boston Horticultural Society, New York State Agricultural Society, and the Onondaga County Agricultural Society, requesting that a committee of three persons shall be appointed by each Society, to examine into the application of this remedy, its cost and facility as regards application, &c., and report its effects in detail to the said Societies the coming fall, or when the crops of Plums are beyond all danger, and perfectly secured.

As Mr. MATHEWS (as well as myself) has had numerous applications for State, County, and individual rights, the latter varying in offers from \$10 to \$100, I am instructed by Mr. MATHEWS to say that "he has determined to communicate the discovery to no one, until it has been submitted to and received the *favorable* report of at least *three horticultural committees*, composed of men in whose *skill and integrity* the public will have the utmost confidence; after which he will forthwith give notice in the horticultural journals that he is ready to communicate the discovery with specific printed instructions, whenever he has received from horticultural committees or individuals offers of rewards, which in the aggregate shall amount to such sum as he may think a sufficient remuneration for his trouble, in proportion to the importance or value of such a remedy; and when such rewards are offered, he will forward the instructions to all at the same time. Or, should the Legislatures of one or more States deem the discovery of sufficient worth to the citizens of their several States, so as to make appropriations that will be satisfactory, in that case he will agree upon the receipt of such appropriations, to make the remedy public for the benefit of any or every body."

As that correct pomologist, Mr. HUMRICKHOUSE, lives so close to Mr. MATHEWS, and will have so fine an opportunity to see the results of his remedy, as applied by himself, (Mr. MATHEWS,) may we not be permitted the coming season to have a few lines from his pen? A. FAHNESTOCK. — *Syracuse.*



NEW FRUITS AND FLOWERS.—I was glad to see the strictures upon what have been represented as two of the latest and most remarkable horticultural and floricultural acquisitions, and for one of which I have been informed from \$20,000 to \$30,000 were paid last spring! This was the *Augusta Rose*, of which I had the good fortune to obtain a budded plant about eighteen inches in length, (in place of being on its own roots, as I ordered it,) at \$5. There was one point of the first importance to people residing in the latitude of Boston, in which they were misled; this was, its being represented in the papers accompanying the circular, as a "*hardy out-door runner*." One communication, however, alone spoke decidedly on this point; but as this one came from a source that was thought worthy of credit, many were probably induced by it to purchase it that would otherwise have waited and been satisfied of its being any thing but a "*hardy out-door runner*," as has since been stated in the *Horticulturist*.

The other plant is Mr. BULL's new Grape, about which there appears to be some slight difference of opinion, as I learn from your last number. When you publish a drawing of any new fruit, it should be distinctly stated whether the cut is intended to give the *fair average* size, or to be a *remarkably large* specimen. If nothing is said to the contrary, it is presumed, if the public are treated *fairly*, that the cut represents a specimen of an *average*, under good cultivation; and some of your correspondents say that the drawing of this Grape is fully one-third larger than any they have seen; and some deny its being equal as a table Grape to the *Isabella*, which does not agree with the statements that have been set forth in its favor—besides its maturing its fruit four weeks earlier than the *Isabella*. The *Diana* Grape, some four or five years since, was sold, if not as high as the above, nearly so, and was represented as altogether superior in quality and early maturity to the *Isabella*; but little, however, has within a year or two been heard of it, and judging from specimens exhibited at the annual exhibition of the Massachusetts Horticultural Society in 1852, which was about the 17th of September, purchasers paid dear for their whistles. A few plants of *Catawba*, that I have allowed to take their own course in cultivated ground, appear to ripen their fruit about as well as the *Diana*, under the same course of treatment. By the recommendation of your esteemed predecessor, I planted a vine of the *Purple Fontainebleau*; but the fruit is rather small, and resembles in flavor somewhat a *Catawba* not fully ripened, and I think will not prove here equal to what he expected.

One other plant I see so much lauded by some one in your last number, is the once famous Greville Rose, which was first brought into notice in the United States under the management of a gentleman who has not yet forgotten the most successful way of getting up an excitement when he wishes to make sale of a great number of any new plant at \$5 each; but this fell so far below the expectations of all who fully believed the statements put forth at the time, that most of the purchasers in this vicinity pronounced it a *humbug*; which, judging from the fact of its being so very seldom planted, would seem to be correct.

Now I do not wish to convey the idea that the Grape, or the *Augusta Rose*, are *humbugs*; but having failed in almost every instance where I have paid an extravagant price, I think I shall wait till I can have ocular demonstration of the superiority of this fruit.

A new Willow is mentioned in Mr. DOWNING's communication as being superior to all other varieties of Osiers, imported by Dr. GRANT. Can Mr. DOWNING give the name of it? Is it for sale? and if so, by whom? If so, he will oblige at least C. W. P.—*Newton, Mass.*

PRESERVATION OF QUINCES.—My Quinces were gathered carefully, about the 1st of October, and spread upon sheets in an unoccupied room, where those left for family use remained until freezing cold weather. They were then carefully taken up in a tin pan, and placed in a cool, dry cellar. A portion of these were made up on the 8th of March, being in a tolerable state of preservation; that is, three-fourths of them sound. Fruit carried a distance and sold in market, could not of course be thus kept. C. E. GOODRICH.—*Utica, N. Y.*



THE PRESERVATION OF GRAPES IN WINTER.—I have long been in the habit of saving Grapes for winter use between bats of cotton. I have always found a tendency to mold, from, as I suppose, the too close texture of the cotton bats. Last autumn I gathered my principal crop of Grapes (*Isabella* and *Catawba*) on the 7th of October—about 200 lbs. In the pressure of other business, they were left spread thinly on sheets, in a dry room, until the 2d of November. This was a fault, as I was aware at the time, since they not only shrivelled badly, but mildew began on the stems. They were then packed—one half in cotton, as usual, and the remainder in *dry Maple leaves*, in alternate layers of each, as in the case of the cotton.

And now for the result. Those put down in the Maple leaves kept much better than the others. The advantage of the Maple leaves over the cotton is, they pack less closely, and so do not exclude air; they do not stick to the decayed berries and the sharp portions of the stems; and they have, in case of any incipient decay, less power to communicate a bad flavor. Indeed, Maple leaves, gathered soon after they have fallen, are perfectly clean, and without scent. I should have said, before this, that these Grapes are yet good, and are now in use.

Theoretically, I have long thought, and do still think, that packing in clean sand would be preferable to any other mode. Sand washed from the vegetable matter that is often mixed with it, is as clean as the new fallen snow, and perfectly insoluble in any common vegetable acid. It can not, therefore, impart the least flavor to fruit buried in it. It has the further advantage of most closely enveloping fruit, especially the berries of Grapes, so that they are separated from each other; at the same time, its dryness will absorb the moisture that may be imparted by a decaying berry. Sand can be readily washed, and dried in the heat of summer; and the same mass could be used from year to year, by being annually washed. C. E. GOODRICH.—*Utica, N. Y.*

MY OWN EXPERIENCE IN TRANSPLANTING.—It is truly gratifying to find, in the last number of the *Horticulturist*, so correct a view, and such valuable suggestions presented by the editor, in regard to the transplanting of fruit trees. We discover of late an increasing inquiry in relation to this matter; yet I apprehend that much information is still wanting to convince the public mind that a consistent and judicious course of treatment—a course best calculated to preserve a uniform growth of newly planted trees, and to promote their prosperity and vigor through life,—although it may be attended with some extra trouble and expense, will in the end prove most beneficial and satisfactory. The views marked out by the editor are much in accordance with my own. I wish, however, that he had been a little more definite and explicit in regard to deep planting, the construction of the borders, and the component materials to be placed about the roots. Deep planting I conceive to be one of the most fatal errors in forming new plantations; and the most difficult to correct, as the people generally do not seem aware of its injurious effects.

It is not my intention to criticise upon what has been said, and well said, by an experienced Editor, but simply to point out my own experience, and the course I have adopted and practiced of late years, in relation to the transplanting of fruit trees; and this I will confine to a small orchard of Apple trees, 85 in number, set in the fall of 1851, which was an unusually dry season, thus rendering transplanting more difficult. The winter previous, I drew four cart loads of peat earth thrown up from a muck swamp a year previous. This I placed upon the ground prepared for the orchard, and added the same quantity of fine yard manure, mixing the eight loads together for decomposition. Directly after harvest I laid out my ground in diamonds, thirty-five feet apart in the rows. My soil is rather a sandy loam, with gravelly subsoil. I then turned up a deep cut back-furrow one way of the rows about six feet wide, as I intended cultivating the ground the coming season. Quite early in the fall I prepared the border for the reception of the trees. The holes were dug four feet wide and two feet deep, carefully placing the surface soil by itself and the subsoil in a separate heap. About the 17th of October I commenced setting the trees. The holes were about half filled with the partially rotted sods from the back-furrow nicely placed

together. Then the heap of top soil previously thrown out was thoroughly mixed with a portion of the compost heap, at the rate of one cart load to about eleven trees, and the remaining portion of the holes filled with this mixture of fine mold, leaving the mold in the center, where the trees were to be placed, some four or five inches above the level of the surface, and the borders about the same depth below the surface, leaving the mold to place the roots upon in the form of a little hillock. After smoothly paring off the mutilated roots, the tree was placed upon this little mound, and the roots extended, leaving them in their natural position; then with a shovel the prepared mold was carefully sifted upon the roots, guarding them with the hand during the process. The roots being thinly covered, I then sifted on about two quarts of slaked lime, and the same quantity of wood ashes; then filled up the hole with the remainder of the prepared soil, leaving the top roots at the base of the stem just covered, and these top roots at least four or five inches above the level of the surface, to allow for settling. This I conceive very essential to the well-being of the tree, that it may at all times receive a sufficiency of light and air. When placed in this position in windy, exposed places, they may require fastening for a time, by a small stake; but this I did not do, with the exception of a few trees. I then placed about the base of the trunk a sufficient quantity of earth or sods to guard the roots during winter; this to be entirely removed the following spring.

In the early part of spring I shortened in the entire tops, taking care to balance the same, and to remove all superfluous branches, leaving from four to six equally arranged on all sides. Instead of mulching in the spring with coarse litter from the yard, as I had previously done, I applied sawdust from the mill, which I found a good substitute, drawing the sawdust from the trees in the fall. These trees all lived, and to all appearance scarcely received any check in their growth the ensuing summer, and have continued to grow and flourish beyond my most sanguine expectations, and attract the admiration of those that pass by, especially those who take an interest in horticultural pursuits. DANIEL E. GEROW.

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IN your number for this month is an interesting article upon the greenhouses of Messrs. EATON & Co., Buffalo, with the ground plan, &c. As it is evidently an admirably arranged establishment, that many may perhaps desire to profit by, would it not be well to obtain from them the *elevations*, that we may see how it looks externally; as also that we may see how to turn the corners at 2 and 6, or 3 and 5, and the mode of uniting the roofs of 2 and 3 with the octagonal conservatory? The total cost of as complete an establishment would also be desirable.\*

I do not agree with some of your correspondents that the "Pear subject" is overdone, or that "LEPERE's pruning" is void of interest to cultivators of the Peach in this country. I, for one, have adopted many of his ideas, not only on my espaliers outside, but also in my fruit-house on Nectarines and Apricots.

While writing, we are threatened with serious injury to the just opening buds of our Grapes in the cold house, from a violent snow storm, with the thermometer already at 30°, and prospect of dropping still lower before morning—(10 o'clock Sunday evening.) The fruit buds of Peaches, Nectarines, Apricots, and Pears outside, I think are not sufficiently developed to receive injury; but the Strawberries, Potatoes, Peas, and other early forced vegetables and fruits that have progressed rapidly the past few days, in their new quarters, will feel the sudden change, and disappoint many an ardent cultivator. A CONSTANT READER.—*New York, April 17.*

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DES NONES PEAR.—The Pear called by this name by Messrs. THORPE, SMITH, & Co., of Syracuse, is doubtless the *Des Moines* Pear, they having probably misread its French title. This will probably explain why the *erroneous name* is not found in other catalogues. P.

\* Will Mr. EATON favor us with the desirable information, and oblige us as well as our readers.—ED.



DES NONNES—not DES NONES.—In noticing a new Pear, in the *Horticulturist*, for November, 1852, which had then recently fruited in the Syracuse Nurseries, I gave the name as I found it in an invoice of fruit trees received from M. LEROY, of Angers, namely, "*Des Nonnes*." The French Dictionary gives no satisfactory solution to the inquiry as to the fitness of this name applied to a fruit. I was gratified, therefore, to find in M. LEROY's last catalogue, under the head of "New Pears," the name *Des Nonnes*. This term has a signification, is quite satisfactory, and very French; so that now we have these plurals—each indicating a fruit—*Des Jardins*, *Des Chasseurs*, *Des Templiers*, *Des deux Sœurs*, *Des Moines*, and last, though not least, *Des Nonnes*; and a very dainty pomological cannibal can devour a chapter of Knight Templars, a brace of sisters, a monastery of monks, a convent of *nuns*, or even several gardens, (the number being left indefinite,) almost literally at a morsel. As some confusion of names in our line is already extant, I deemed it well enough to call attention to this instance, and, as the Pear is one which is likely to become better known, to give it a chance to start right. Hence these lines. J. C. HANCHETT.—*Syracuse Nurseries*.

RHUS COTINOIDES (NUTT.)—In the January number of the *Horticulturist* the culture of the "Sweet Gum tree" (*Liquidambar styraciflua*) is recommended. This is well, and we hope it will be commonly cultivated; because it is indeed a hardy, beautiful tree, quite common in the Middle and Southern States from Pennsylvania to Florida. There are many other American trees and shrubs highly ornamental, which we would be glad to see in general cultivation, among which is the *Rhus cotinoides* of NUTTALL, resembling, as its name indicates, the *Rhus cotinus*, or "Purple Fringe tree," a native of the south of Europe and Middle Asia, which is quite common in pleasure-grounds in this country. NUTTALL discovered the *Rhus cotinoides* on the high rocky banks of Grand river, Arkansas, where he obtained specimens of it in fruit only, which he deposited in the herbarium of the American Academy of Science at Philadelphia.

On the 6th of April, 1842, we found it both in flower and fruit, in descending the mountain on the road from Blountsville to Huntsville, in North Alabama. It was from two and a half to three miles south of the ferry on the Tennessee river, from which the Madison turnpike leads to Huntsville. There was an open space on the rocky side of the mountain, on which were many lilac-like shrubs of this beautiful *Rhus*, mostly in fruit, nearly all of which was abortive and covered with numerous hairy, shaggy-like pedicels, which render this *Rhus* so very ornamental. Next day we met it again in the woods, near the residence of a Mr. BAILLY, twelve miles from Huntsville, on the road to Salem and Winchester, in Tennessee. Here it attained the size of a tree at least a foot in diameter, and from thirty to forty feet in height.

I have been thus particular in describing these localities, in hope that some one will introduce it into cultivation. It certainly is equal in beauty to the *Rhus cotinus*. It is larger, and its leaves are larger and more oblong. It flowers at least six weeks earlier, allowing for the difference in climate. We saw the common Locust, (*Robinia pseudo-acacia*), which is indigenous in the mountains of Alabama and Tennessee, in flower at the same time. S. B. BUCKLEY.—*West Dresden, N. Y.*

PAMPAS, DEKALB CO., ILL.—SOIL, CLIMATE, PRODUCTIONS, &c., &c.—This town is situated a little east of the center of the county, and the county is about the center of the State east and west, and in the second tier from Wisconsin line. The soil is a black muck, in the low grounds, from one to two feet deep; and as the ground ascends, the soil grows less black and of less depth, so that on the ridges it is not generally more than about six inches. The subsoil is of a clayey nature, sometimes mixed with gravel, and grows more dense and impervious to water as we descend into it. At the depth of 12 to 16 feet we find blue clay or gravel. The water is what is commonly called hard, or brackish, but cool and clear. There are no swift running streams. Sloughs, or marshes, are common, which usually produce an abundance of grass for hay. Water is found by



digging from 2 to 20 feet in any place. The spring is usually rather cold and backward; sometimes extremely dry, and sometimes extremely wet. The summers are cool and comfortable. The autumn is delightful—almost all one continued Indian summer until December, (I ran the plow on the 15th, 16th, and 17th days of the latter month this year,) giving the farmer ample time to gather his bountiful crops. The winters are sunshiny and pleasant, except a few weeks, which are severely cold, even dangerous to venture far from home unless amply protected by clothing. The productions for export are wheat, (mostly spring,) oats, corn, buckwheat, rye, barley, beef, pork, butter, eggs, poultry, and wild fowls. We are rather backward in the horticultural department. Many of the first settlers, who have been here 12 or 15 years, are just setting out orchards. Fruit trees of all kinds grow with extreme rapidity. I know of some Apple trees, five years from the nursery, which are six inches in diameter, and bear two bushels of fruit. English Cherries do extremely well. I have eleven, set three years last spring, from the Buffalo Nursery. They were then about one inch in diameter; and some now measure over four inches in diameter, and have borne fruit every year since they were set. I have some common red Cherry trees, four years' growth, that measure sixteen inches in circumference. These trees have had no extra culture or manure. Plum trees grow well, and bear well. The country is very natural for Plums, and many grow wild in the woods. Raspberries, Currants, and Strawberries, do extremely well. Peach trees grow very fast and bear large crops; but are very likely to kill by the severe cold of winter. On the whole, I think there are but few places where can be raised better fruit, or more of it, than here. S. W. ARNOLD.—*Pampas, DeKalb Co., Ill.*

A LETTER FROM MUSCATINE, IOWA.—We have seen it stated, that there was soon to be started "A Nurserymen's Express." In the far west we feel the want of such an express very much. The western people will go largely into the cultivation of trees and shrubbery. Experience has proved that almost every variety of tree and plant cultivated in New York and Pennsylvania will do equally well, and, as a general thing, grow more thrifty. The warm weather of fall and spring sometimes injures the Peach. No portion of our country has ever been settled where so much attention was given to fruit growing as in the northwest; and our labors have been crowned with great success. The Northwestern Fruit Growers' Convention, held at Chicago last October, as well as every Agricultural Fair, is a plain demonstration that we do not live upon corn and pork alone, but we have a taste for fruit also; and our western soil and climate are quick and bountiful in the great luxury of fruit. S. F.

TO THE VICTIM OF HAPPY CONTENTMENT.—*Friend Atticus*—I fear my prolixity has taxed your patience, so I come at once to my plan. I hope you will appreciate the benevolence that prompts my efforts. It is simply this, that we exchange places:—as your physician, I recommend such a change. I know you will be happy. The exhaustless energies of your mind will revel in active exercise in a sphere which, for awhile at least, might seem limitless. You would find something new to do all the time; and then what you had done would show in such bold relief—to such advantage—that you would be in danger of growing vain of your own accomplishments. While you were thus pleasuring yourself, I would try and content me in your home, prosy as it might seem to a stirring westerner, with all its attained excellencies and perfections—for we have become so habituated to a life here where everything is *being* done, that we might be restive in a land where anything was finished.

I hope you will not accuse me of vain egotism when I tell you how fond I am of beauty wherever it is found, and of my cultivated and refined tastes—though indeed they might seem a great bother just now; but I try to keep them burnished for that happy by-and-by, when I trust they will find scope for exercise. I only tell you this because I know I am a stranger to you, and you would like to feel that all your gathered perfections would not be like sweetness wasted on the desert air. I have a whole troop of little Olive plants; and they too admire the beautiful.

In spite of farmward and household cares, I struggle to train them mentally, morally, and physically. I have my own peculiar notions about their education, and can fancy many facilities in your home which might lighten my occupation. I fancy, with the surroundings of comforts and beauties, I could teach them with better success, and more clearness; and they would show evident signs of improvement. At any rate, I should find more time there to devote to their culture. Thus I would try to make the time of my exile for your sake, pass with profit and usefulness. By this arrangement we should enjoy a little of the rest and quiet pertaining to luxury, which would have the advantage of novelty for us. No doubt this change for ourselves, as well as yourself, would tend to the rejuvenating and brightening our powers amazingly. I would promise, for my better half as well as for myself, that all should be kept in perfect order. I know my husband must have the bump of order; for he declares he loves to have a place for everything, and a wife that knows how to keep things in their places.

In the meanwhile, you may take those four or five reserved acres, and occupy yourself thereon. Upon it is a fine grove of native trees of different sorts. They are already thinned, and the underbrush cleared away, and the sloping hill-sides cleared and broken up, and under cultivation. You may erect a large, convenient, tasteful residence, with all its appurtenances—not forgetting the conservatory and aviary, which are among the pet dreams of my ambition. You may make winding roads and broad lawns. The trees you may thin out, and so group them to suit your most fastidious taste; and among the indigenous occupants of the soil, you may intermingle those of rarer beauty. Shrubbery and plants rare and beautiful, you may gather in full profusion. Fences you may build, and hedges plant. You may erect green houses, graperies, and espaliers. On the hill-side you may lay out such a garden as is seldom seen, except in books and imagination. I may sometimes be tempted to envy your occupation, as I wander in fancy from my temporary home to you and your labors. How will your happiness be enhanced by the thought, "all this I am doing not merely for my selfish gratification, but for the happiness of so many who are capable of enjoying the results of my work with the proper appreciation they deserve. What pleasure to shorten for them the interim between their dreams and bright actualities, which might take them plodding years to accomplish."

Let me add, that a thriving, pretty village is only a mile from us, and upon which from our height we look down, and by railway only twenty miles from one of our greatest western marts; so that any thing you may choose to have from the east, may be conveyed almost to your gates. You need only to bring with you a little ready means, and that good judgment and intuitive perception of the true in taste and beauty, with quick energy and decisive action, which I am sure you possess. In two years you may make this all we wish, and perhaps accomplish your entire recovery. Then we may return to it, and be happy the rest of our lives, and you will have fortified yourself forever against ennui and discontent—which, with all their protean forms, will assail you if you yield to the syren charmer—and rest yourself in quiet content. This, Sir, is my prescription. That you may work out your perfect cure, is the sincere wish of your true friend. *ELSIE.—Woodside, Waukesha, Wis.*

#### LETTERS FROM THE WOODS.

*The Woods, April 14, 1854.*

THE spring, so long and so anxiously looked for, comes on apace. Already the snow is melted from the southern slopes of the hills, and the grass looks fresh and green by the side of the rivulets that flow down in the valley. The Willows by the old stone bridge—where meet the brooks, known in my younger days as the "Great" and the "Little,"—shed a sweet fragrance upon the air, and the Birch and Maple buds are swelling upon the trees in the open pastures and meadows. The *Arbutus* (*Epigæa*.—Ed.) and *Violet* are in blossom, and beauty is spread abroad

through earth, and sea, and sky; and dwells now, if it does not at all times, in the face and heart of man. From my chamber window I look out upon the warm blue sky and the dim old mountains that skirt the horizon, and bless God, who made "the country."

It is well that there yet remain some portions of our country which are not swallowed up by the all-absorbing "town." I am thankful for the privilege of viewing God's works, *unimproved* by the hand of man. Those patches of woods, that stand out here and there upon the landscape, — those groves, so beautiful because so natural, — I prize as the miser prizes his gold. Rusticus would cut them down, and sow wheat where they stand: but my "no" is emphatic; and my groves will still cool the air, and afford me shelter from the scorching sun of summer.

My bees, awakened by the genial warmth, are flitting around the hives; but many of them who come forth I fear may never return. How gladly must they hail the approach of more pleasant weather! — how delighted to know that the reign of the Ice-king is broken, and that the Queen of the flowers will soon scatter her blessings over all the broad fields of our quiet domain.

Towser, my highly-prized Newfoundland, enjoys the sun amazingly. He lies stretched out at full length on the sunny side, half-asleep and half-awake, a perfect picture of content; and the cackle of my Cochins in the yard, and the songs of the robins in the trees, alone break the stillness which hangs around my "box in the woods."

Z

April 18, 1854.

A ROBIN is busily engaged in building her nest on the eap of my window, and she sings merrily as her work progresses. Doubtless she is as happy as we mortals are while building *our* houses, in which we hope to pass in quietness the declining days of life. With what care she selects the sticks of which the outside of her nest is composed; and how much taste she displays in bringing together the feathers, hairs, and soft pieces of bark, which form the inner lining of the nest. I wake, long before the dawn, to listen to her joyous song; and regret that man may not be as happy as are, apparently, many of God's creatures, who are less gifted.

The red buds of the Peony are pressing up among the dead stalks of a past year's growth. Strange, that the few brief glimpses of the warm sun should so soon have called them forth. I see they are increasing in size day by day; and, as I cut down the old stalks, I am astonished at the great number of shoots which are springing up.

Birds love music. As I sat under a tree in front of the house, this morning, I took my flute and commenced playing a lively air. I noticed a couple of robins on a tree a few rods distant, who, as I continued playing, flew to the ground, and hopped along, stopping occasionally to listen, till they got within a few feet of me; and there they stood, turning one side of their heads toward me, and then the other, till I put up my instrument, when they flew away.

Spring is the most poetical of all seasons. What can be more beautiful than the following lines, by the poet of Nature, THOMPSON?

"Moist, bright, and green, the landscape laughs around.  
Full swell the woods; their every music wakes,  
Mix'd in wild concert with the babbling brooks  
Increased, the distant bleatings of the hills,  
And hollow lows responsive from the vales,  
Whence blending all the sweeten'd zephyr springs.  
Meantime, refracted from yon eastern cloud,  
Bestriding earth, the grand æthereal bow

Shoots up immense. \* \* \* \* \*  
Then spring the living herbs, profusely wild,  
O'er all the deep green earth, beyond the power  
Of botanist to number up their tribes;  
Whether he steals along the lonely dale,  
In silent search; or through the forest, rank  
With what the dull incurious weeds account,  
Bursts his blind way."

Z

### Kitchen Garden.

VARIETY AND PROPERTIES OF MANURES. — The manures in general use in gardens are numerous, but I shall only notice those which I consider the most useful; and of these, the dung of horses, if not the best, is certainly the most general in use.



Next to the dung of horses, that of oxen and cattle is in the greatest request; and if slightly fermented, is an excellent manure for light, hot soils. It is also well calculated for soils of a dry, absorbent nature, as it retains its moisture for a greater length of time than most others.

Green vegetable matter is an excellent manure, but less attended to than it ought to be. Instead of collecting all useless vegetables, &c., in a garden into one heap, let the following simple mode be adopted: When a piece of ground is to be dug, go around and collect all the decaying vegetables, and immediately dig them in. The sweepings of grass walks and lawns are also of much use as a vegetable manure; and on being brought into the garden, they should be dug in before fermentation commences; but it must be observed, that they should not be buried at too great a depth, otherwise fermentation will be prevented by compression and the exclusion of air.

Sea-weeds, where they can be procured, make excellent manure for most vegetables, but particularly for Sea Kale, Artichokes, and Asparagus. This manure, however, is very transient in its effects, and does not last more than for a single crop, which is accounted for by its containing a large portion of water, or the elements thereof.

The dung of birds, either wild or domesticated, affords a powerful manure, particularly that of the former. Pigeon's dung is in great repute, but it should only be used as a compound; or, if used as a simple manure, the greatest care must be observed in the distribution of it. It is a good manure for Strawberries and Raspberries; also the Fuchsia, Pelargonium, Coxcomb, Balsam, and it is indeed a rich manure for all potted plants that will bear rich feeding.

The dung of sheep affords good manure, but it is seldom used in gardens.

Soot is a very powerful manure, and ought to be used in a dry state, and thrown on the surface of the ground. It is advantageously used in crops of Onions. It is sown at all times with good effect, and where it has been sown no maggot has appeared.

The ashes of wood, if not too much burnt, is a lasting manure, particularly for the Grape Vine and Pear; and if sown among Turnips, it is of great use to protect them from the fly.

Of all mineral manures, lime is most known and generally used. It should, however, never be applied with animal manures, unless they be too rich, or for the purpose of preventing noxious effluvia. It is injurious when mixed with any common manure.

Manures, whether animal or mineral, are of such importance to vegetation, that all possible diligence should be used in the collecting and preparing of them for the different purposes for which they may be required. By a proper application of them, and by a rotation of cropping founded on just principles, the worst garden ground may be not only improved, but rendered fit for the production of every vegetable that is usually cultivated in the different localities of this country. ALFRED CHAMBERLAIN.—*Gardener to Delancy Kane, Newport, Rhode Island.*

### Answers to Correspondents.

BEING a subscriber to your valuable *Horticulturist*, I beg to say that the recommendations I have frequently seen and heard of ashes being a prevention against the Peach tree borer, cannot be depended on. I carefully examined my trees last autumn, and cleared out and fully eradicated every borer I could find: and put around each tree about half a peck of ashes. Yesterday I examined the same trees, and found them nearly all affected, and from one three year old tree I extracted full a dozen borers. Therefore I conclude the only remedy is war to the knife. Is it so? JOHN POWELL.—*Dayton, O.*

It is possible that the performance of some part of the process was imperfect, as it is beyond a doubt that ashes placed around the tree at the place where the borer deposits its eggs, generally prevents its attack.

I AM building a cold grapery, 22 by 60 feet. I have excavated three feet deep, and filled with a good compost. In your opinion, is a drain necessary? If so, how made? JAMES M. TAYLOR, *Syracuse, N. Y.*

If the subsoil be sandy and porous, draining may not be necessary; but in most cases it is

useful. Make it two to three feet deep below the level of the bottom of the border, and 18 or 20 inches wide, and fill with small stones, laying some sods or straw over them before the earth is laid on. The drain to be under the center of the border and carried to some outlet, or to some distance from the border. Such a mass of rich soil as a vine border soon becomes sour, unless surplus moisture can pass off freely.

### Notices of Books, Pamphlets, &c.

ELLIOT'S FRUIT BOOK; OR, THE AMERICAN FRUIT GROWER'S GUIDE IN ORCHARD AND GARDEN. By F. R. ELLIOT. New York: C. M. SAXTON, 1884.

For several years past a book on fruits, or "A Western Fruit Book," has been occasionally announced as forthcoming from the pen of F. R. ELLIOT, and we have at length the pleasure of seeing it on our table—a well got up duodecimo volume of nearly 500 pages, very much on the same plan as *Thomas' Fruit Culturist*. It is profusely illustrated with outlines of fruit, differing from the outlines in other works in having the core in kernel-fruits, and the stones in stone-fruits shown, also in having the stem and calyx cavities shaded. This will be regarded by some as an improvement, but does not strike us as of very great importance.

Mr. ELLIOT has for a long time given much attention to the examination and comparison of fruits, and having had the advantage of the latest experience of cultivators, and the latest works on the subject, has undoubtedly made a book that every man engaged in fruit culture may consult with advantage. If Mr. ELLIOT ever intended to make it a "Western Fruit Book," he has evidently changed his mind; for, with the exception of an occasional remark, and the description of a few western fruits, we see nothing particularly western in its character. Nearly all that relates to the propagation, culture, pruning, and training of trees, and the preservation of fruits, is copied from other works; and for our own part, we must say that we have derived more information in regard to the peculiarities of western soil, climate, and culture, from the report of the Fruit Grower's Association, than we have been able to glean from Mr. ELLIOT's 500 pages.

Mr. ELLIOT had a fair field for both fame and usefulness. The great States of Ohio, Kentucky, Indiana, Michigan, Illinois, Wisconsin, and Iowa, are rapidly turning their attention to fruit culture. The authors who had previously written on pomology, knew from actual experience and observation very little of these States, as regards the influence of the soil and climate on the culture of fruit; and fruit culture had made so little advancement that scarcely any reliable experience could be collected. Here Mr. ELLIOT had the advantage. Valuable results have been obtained during the last three or four years throughout the newer States, and he might have used them to great advantage. We cannot see, however, that he has done so; for in his description of the most popular and important varieties, we seldom find a word said as to their failure or success in the West, and he even omits many valuable particulars given in other works. We are convinced that he has erred greatly in making his work too general—in going over the ground already so fully occupied by DOWNING'S and THOMAS' works—instead of devoting his labors to a field yet unexplored. This, however, is his business, not ours; but we must say it, because we think it. When a man writes a book on a subject like pomology, on which so many treatises exist, and these too of recent date, he should avoid the beaten track, and strike out a new course for himself, so as to give character to his work. We have in this great country of ours, embracing

so many climates and soils, room enough for many treatises on the culture of fruits; but if they all follow in the same path, and copy and re-copy from each other, the fewer we have, the better.

The fruits follow in alphabetical order, thus—Almonds, Apricots, Apples, Blackberries, Cherries, Currants, Gooseberries, Grapes, Nectarines, Peaches, Pears, &c. This we do not consider right in a work pretending to science. The natural classes, kernel fruits, stone fruits, and berries, should certainly be grouped together. The varieties also follow in alphabetical order, instead of being classed in regard to season of ripening. Those who consult the book to make selections, will, we think, find this an inconvenient arrangement.

In regard to merit, there is a classification which, if it were entirely correct, would be a very good one. He makes three classes, thus—"Class 1, worthy of general cultivation." "Class 2, new and untested; adapted to certain localities, or amateur gardens." "Class 3, Unworthy of cultivation." Mr. ELLIOT adopted this arrangement in preference to that of the National Pomological Society—"good," "very good," "best,"—which he considers an imperfect guide to fruit growers.

He describes upwards of 440 varieties of apples, which occupy about one-third of the book. In the first class there are 74 varieties; in the second, 221 varieties; and in the third, 147 varieties. It strikes us as rather strange that such varieties as *Bethlehemite*, *Challenge*, *Cornish Aromatic*, *Fullenwaulder*, *Fort Miami*, *Golden Ball*, *London Sweet*, *Melting*, *Richmond*, *Rome Beauty*, and many others as little known as these, should be published as worthy of general cultivation; while such well known sorts as *William's Favorite*, *Summer Queen*, *St. Lawrence*, *Kescick Codlin*, *Holland Pippin*, *Pumpkin Sweet*, *Blue Pearmain*, *Twenty Ounce*, &c., are classed as new and untested, &c., in Class 2. Neither do we find in this large list of second class any distinction between "new and untested" varieties, and those adapted to certain localities or for amateurs. This is a very grave defect, because many of them are among the oldest varieties on record.

Of Cherries, 140 are described. In Class 1, 31 varieties; in Class 2, 53 varieties; and in Class 3, 56 varieties. Class 1 contains 19 of Dr. KIRTLAND's new varieties, not fruited in half a dozen localities in the United States, for general cultivation; while such well-tried, popular sorts, as *May Duke*, *Black Eagle*, *Knight's Early Black*, *Yellow Spanish*, *Carnation*, *China Bigarreau*, *Napoleon Bigarreau*, *Elkhorn*, &c., are classed as new "and untested," or only of local value, or for amateurs. This will appear to many as strange, for it is a well known fact that the *May Duke* is the best variety known for a great portion of the west, where all the Heart and Bigarreau varieties are too tender for the climate. A friend of ours remarked, that he was quite sure that either the author or printer had transferred the varieties to the wrong class by a mistake; and we should not be surprised if it was so. In his third class of Cherries—unworthy of culture—we find the *Large English Morello*, and *Plumstone Morello*, two of the very best of the class of Cherries in existence, at least, as far as we have known them tested.

Twenty varieties of Currants are described—nine in first class, and eleven unworthy of cultivation. Among the latter class we find the *Cherry*, which is decidedly the largest Currant known, and one we would not exchange for any other variety we have ever seen. Others are recommended which are less known and greatly inferior.

About 420 varieties of Pears are described—54 in Class 1, 222 in Class 2, and 141 in Class 3. In the first class we find such varieties as *Beurre Langelier*, *Brandywine*, *Black Worcester*, *Coit of Ohio*, *Doyenne d'Alençon*, *Honey*, *Kirtland*, *Knight's Seedling*, *Nouveau Poiteau*, *Soldat Laboureur Van Assche*, and many such new and little known sorts,



while in class two we find *Andreas*, *Bloodgood*, *Paradise d'Automne*, *Pecore d'Analis*, *Bergmont Goulette*, *Capitulant*, *Duchesse d'Angoulême*, *Henry IV*, *Napoleon*, *Summer French*, and several others of the very best and most widely known varieties in cultivation.

We ask men of experience, and we would put the question to Mr. ELLIOT himself, will not this classification mislead inexperienced people, and be likely to lead to some serious mistakes? We verily believe it will, and we would suggest some immediate alteration.

We note a few changes of name, which will only create confusion. For instance, *American Summer Pearmain* is changed into *American Pearmain*; *Yellow Bellflower*, into *Bellflower*; *Twenty Ounce*, into *Cayuga Red Streak*; *Canada Rivinette*, into *Canada Pippin*; *Yellow Harvest*, into *Harvest*; *Hubbardston Nonsuch*, into *Sutton*. All these changes are made where the names were well established. Among Pears, we find *Doyenne d'Ete*, or *Summer Doyenne*, changed into *Dani's Summer*; *Soldat Laboureur*, into *Soldat d'Esperin*; and some half-way attempts to Anglicize French names, thus—*Louise Bonne de Jersey*, is made *Louise Bonne of Jersey*. It appears to us much better to let foreign names alone, than to make them thus half-and-half—neither one nor the other. In a few instances we find the English name, or the English of the name, added to the original. If this had been carried out through the book it would have been a very acceptable feature; but it has merely been attempted.

We note an occasional error and omission, but have not space now to point them out in detail. *Bourre gris d'Hiver*, which is a very promising and remarkably distinct fruit, is not noticed; but the name is given among the synonyms of *Easter Bourre*. *Ne Plus Mouris*, a very well-known, long-keeping winter Pear, is treated in the same way. *Belle Epine du Mos*, or *Duc de Bordeaux*, a well-known and excellent winter Pear, is confounded with the *Vicar of Winkfield*, &c., &c.

We observe a great deficiency of information in regard to the habit and character of trees, except as relates to a few old and common sorts. This is a very important point, and we are surprised that Mr. ELLIOT should have paid so little attention to it.

This book has come before us at a season when we are actively engaged out of doors, and have little time to read; consequently our examination has been hurried and imperfect. We have probably found fault more than is becoming in us; but it is expected that we will give our opinion of it, and we must do it candidly. We have the highest respect for Mr. ELLIOT, and should be sorry to depreciate or speak lightly of his labors. He is a zealous and honest Pomologist, entirely reliable as far as his information extends. The errors we have alluded to, and others, will no doubt be promptly corrected, and the book be made one of the most valuable of the kind in circulation. We commend it to the attention of all interested in the subject.

#### BUCHANAN ON GRAPE CULTURE, AND LONGWORTH ON THE STRAWBERRY

MOORE, ANDERSON, & Co., of Cincinnati, have issued a new edition of this excellent little work. We give the preface:

"Three editions of this little treatise, within a year, being required to supply the demand for it, would seem to indicate that the public interest in Grape culture is on the increase. The author therefore deems it his duty to give the result of his own experience, and that of his fellow-members of the "Wine-growers' Association," in vineyard culture during the past year. It was found that the severe frosts of January and February, 1852—8° to 12° below zero—killed many of the grape buds in warm exposed situations, and several vineyards in Kentucky, a few miles south of this city, scarcely produced any fruit. The hard frosts of the 18th and 19th of

March did not injure the grape buds, although many apples, such as the *Yellow Belleflower*, were killed in the opening bud; all the peaches, many of the pears, and most of the cherries were destroyed.

"The frosts of the middle of April and second week in May injured the young shoots of the vine, especially in low situations or near moisture, and in the rows near grass; but with all these visitations from frosts, the grape crop was a very promising one until attacked by the *rot*, the second week in July, and subsequently the first week in August—the latter but slight. This disease appeared to affect those vineyards most, that were in low situations, or not fully exposed to a free circulation of air, either from close planting or otherwise.

"High manuring, deep hoeing or plowing, and a want of summer-pruning at the right time, it was thought, increased the liability to *rot*. This disease, or something like it, prevailed in many parts of Europe, last year, where it had scarcely been known before, and in the island of Madeira caused an almost entire failure of the grape crop.

"In this vicinity it cut off about half of the average crop, reducing the product of the whole county to about one hundred gallons per acre. Some made more, but many less than that average. It was observed that the *poor lands* and *high situations* suffered least. It is supposed by some that the *rot* is allied to the *mildew*, and that scattering flour of sulphur over the vineyard, in June and again in July, may prevent the rot, as sulphur is applied as a remedy for mildew, in grape-houses, with complete success. This experiment might be tried. Ashes are certainly a valuable application, scattered over the surface and turned under with the spring hoeing. Dr. KENFESS strongly recommends this. Insects did but little injury to the vine last year. The one "resembling a small rose-bug" was scarce.

"A new woodcut, to illustrate spring-pruning and summer-training, has been inserted in place of the old one, which was imperfect in some points. In spring-pruning it is found best to *omit the first tie*, if the branch is too stiff to bend easily in a circle or bow. This leaves a three-quarter bow or circle. Summer-pruning should be done *promptly*; if deferred too late it is certainly injurious, but be careful not to prune too close.

"The vineyards near Hermann, Mo., are said now to amount to near five hundred acres. The liberal premiums offered by Mr. ALEXANDER KAYSER, of St. Louis, for the best Missouri wines, were awarded at Hermann in August last, at a large and enthusiastic meeting of the wine-growers of that vicinity.

"*Schuyllkill Grape* has been adopted by the 'Wine-growers' Association,' as the proper name of that heretofore known as the 'Cape Grape'—Cape being a misnomer."

### Horticultural Societies.

BROOKLYN HORTICULTURAL SOCIETY.—The second stated Monthly Meeting of this flourishing Society was held at the rooms, Athenæum Building, Atlantic street, on Thursday, March 9th. The display of plants and flowers was not so large or varied as at the former meeting, but was respectable for the season.

*Third Monthly Meeting, April 6.*—The meeting was held at the Society's rooms. The display of plants and flowers surpassed the utmost expectations of the committee. The exhibition-room was much too small for the articles deposited to be displayed properly, and uncomfortably limited for the convenience or pleasure of the numerous visitors. We hope some more commodious room may be secured for future occasions.

Among the objects on the tables, we noted as novel or choice, *Aquilegia glandulosa*—a pretty blue and white flowered Columbine—from H. A. GRAEFF's greenhouses, Brooklyn, L. I.; also, a striped variety of *Azalea sinensis*, said to be a new seedling—very beautiful; *Camellias* *Hamadryas*, *Ellen's Favorite*, and *Washington*; six varieties of *Cineraria*; *Tetratheca* (*Tremandra*) *verticillata*—a very pretty greenhouse plant, with whorls of linear leaves, and bright blue flowers on long peduncles—already familiar to many of our readers; *Ornithogalum aureum*; *Nepenthes distillatoria* (Pitcher-plant)—a small specimen; and several seedling *Petunias* and

Calceolarius—none of the latter of any striking merit, but large and healthy plants. The Camellia Ellen's Favorite is one of Hicks' seedlings, the stock of which is in the hands of the exhibitor. It promises to be a flower of permanent merit—not so liable to sport as Duchess of Orleans, and other striped types, which have lately created so much *furor florum* among the Camellia speculators. We question whether it will bring \$1,000, even in trade, as Jenny Lind has done, so much talked of.

A flower of another of Hicks' seedlings was shown us by Mr. T. Hogg, Jr., but we could not form any decided opinion as to its merits.

A stand containing sixty blooms of Pansies was shown by Mr. JAMES WEIR, Florist, Bayridge, L. I. Several of the flowers were worthy of notice, especially the dark varieties. They were all seedlings from imported English seed.

I. B. LENOIR, New York, had seven seedlings, also from imported seed, two of which were above the average, both in size and beauty of color, though wanting in substance and form. They may be improved, however. One of them, a large creamy-white flower with dark feathered or laced center, should not be lost sight of. We have, with the permission of Mr. LENOIR, named it *Bessy Kane*, in compliment to a young lady who has a decided taste for this class of flowers, and one who deserves such distinction at the hands of one of our best florists. We trust the variety, though not first class, will serve to elevate the growing taste for florist flowers, and urge the experienced florists of our country to improve the favorite Pansy. Mr. LENOIR has promised us that he will propagate it. The other variety is a dark velvety purple or brown color, large, and of tolerably good form, superior to the majority of American seedling Pansies. It has been named *Peekskill Favorite*, and will prove worthy of notice. Next season we hope to have to report much progress in this department of the florist's business.

WALTER PARK exhibited a well-flowered plant of Weigelia rosea; also, *Aecia paradoxa*? (probably a gardener's name); Camellias Duchess d'Orleans, Landrethii, &c.; and a large plant of *Spiræa Reevesii*.

We wish the gardeners and florists would have their plants correctly and legibly named, *for our especial benefit*, if not for their own interest, and the public good.

A stand of flowers in pots was deposited from the garden of FISHER HOWE, Esq.; also, a collection of plants.

MESSRS. POYNTER & CANNER had several seedling Cinerarias of merit, also a collection of miscellaneous plants.

JAS. WEIR, Bayridge, L. I., had a very fine table bouquet made up of the choicest flowers of the green and hot-houses. Also, fourteen choice plants of Roses, in four varieties, embracing Hermosa, Agrippina, Safrano, and Souvenir de Malmaison. A neatly trained specimen of the three-colored *Tropæolum* (*Tropæolum tricolorum*) attracted much notice.

We have perhaps omitted many of the noteworthy items, but such omission is inevitable in a crowded room. We thank two of the competitors for the lists of their objects; it aids us to have such handed us, and would not be much extra labor to the competitors. We hope the committees will have arrangements made to announce their awards at the sitting of the Society on the evening awarded. They have admitted the importance of this. The next exhibition will take place on Thursday, April 30th.

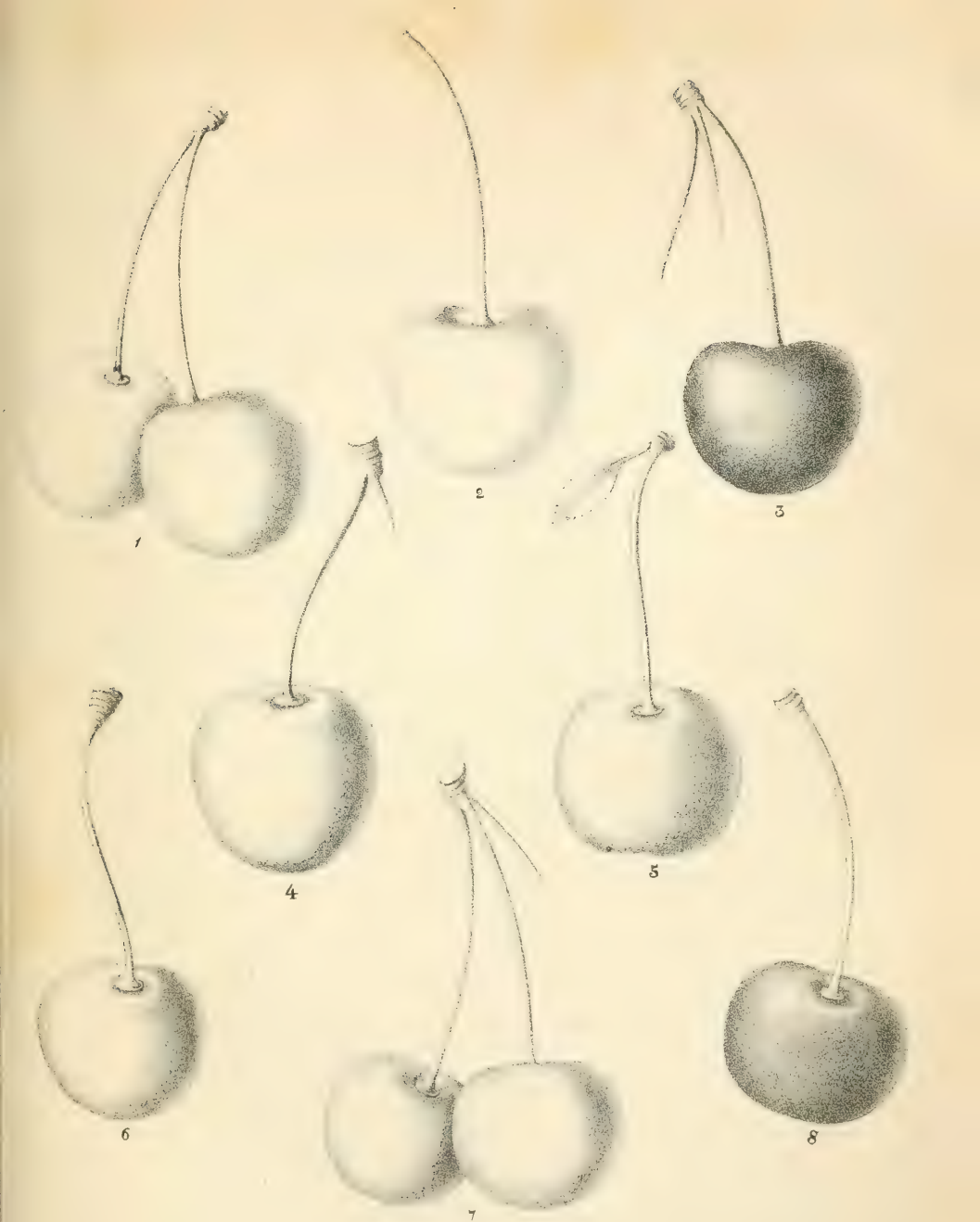
The meeting of the Society was organized in the library-room. The President, J. W. DEGRAUW, Esq., in the chair.

Some important business was transacted as to procuring the room for the first semi-annual exhibition, to be held on the 10th, 11th, and 12th days and evenings of May, at the Athenæum. It is supposed that the display will be unusually fine, and the affair a successful attempt to show that there still exists pure taste in the Empire State.

R. R. SCOTT inquired if any communication had been made to this Society, by the New York Horticultural Society, as to a resolution for the collection of valuable trees and shrubs indigenous to Texas, Oregon, and other lately annexed territories, by appointing a committee to collect subscriptions, &c., for that purpose.

The Corresponding Secretary replied that no communication had reached him on the subject. On motion, adjourned.





1. Yellow Yamashita. 2. Tinted Early Black. 3. Vignola Bigarreau.  
 4. Queen Hortense. 5. Burr's seedling. 6. Lowner's Late Bud. 7. Black Eagle.



## A few Hints for Beginners.

ONE of the most fruitful sources of disappointment to the tyro in gardening, is the injudicious choice of material, or, in other words, the selection of objects for cultivation not adapted to his experience or his circumstances. Mr. A, for instance, by reading, or perhaps by the example of some neighbor, all at once conceives a desire to have a fine garden. He procures the nurserymen's catalogues, or some books, and placing entire confidence in the descriptions which he finds accompanying the names of fruits, ornamental trees, shrubs, and flowers, selects the newest, and, as he supposes, the *best*. These he *must* have, because he does not wish to be second to any in either the beauty or novelty of the objects on which he is about to lavish his care. Unfortunately for him, however, the stock of new and rare fruit trees, plants, and flowers, is small, and the specimens to be had rather feeble, and requiring great care and skill to bring them to a successful issue. His limited experience, as well as his impatience, prevents him from giving them the needful treatment, and they become a total failure. This cools the ardor of the beginner; visions of fruitful and blooming gardens, on which he had feasted his imagination, become misty; he hesitates, falls back into indifference, and finally and perhaps forever abandons the delightful scheme of gardening in which he had embarked so hopefully and zealously a few months ago. This is a very great misfortune; not for him alone, and his family, who are thus to be deprived of some of the highest and purest pleasures of life—the enjoyment of a good garden, but for his neighbors and friends, who are deprived of the good example which his success would have given them; and for the country at large, because gardens are public preachers, inculcating industry, refinement, and other personal and social virtues, upon which the comfort and happiness of society in a great measure depend. Now, in order to prevent in some small degree, if possible, the disastrous consequences of such failure, we propose to offer to beginners a few suggestions.

Gardening cannot be learned in a day, or a week, or a year. Men have to spend years in acquiring knowledge enough to make them competent to manage well even an ordinary garden. No man can be a good gardener without reading, and extensive reading, too; but no amount of reading can possibly, by itself, enable a man or woman to enter at once upon the management of a garden, and do it *successfully*. *Practice* is necessary—much practice,—and with it, careful study and observation. We may study in books the written history and character of any given tree or plant, until we suppose we know all that can be known about it, and yet when we undertake its cultivation we often find that our very first step was wrong. This every person of experience will testify to be true. The history of the introduction of every new plant and tree corroborates this. An accurate knowledge of the proper treatment has only been acquired by experience. “What, then, are we to do?” the uninitiated may ask. “Do you wish to discourage us?” “Must we go and serve an apprenticeship to some great master of the art and science of gardening, before we undertake to



plant and make fruitful and beautiful our humble half acre?" By no means do we wish to discourage you, or magnify the obstacles that lie in the way of your success. Neither do we ask you to serve an apprenticeship to any great master. What we wish to do, is merely to point out, according to the best of our humble judgment, the true path for beginners to pursue, if they would escape the rock on which so many hopes are shipwrecked.

We caution you against falling into the error which Mr. A committed, to wit, resolving to eclipse, in his first season, all that his neighbors had accomplished in years. This is a fatal sort of ambition, and one which we can not approve of, although we admire high aims in general. If you are totally destitute of experience, consult some friend or neighbor who is competent to advise you, and with his assistance lay some plan. Don't make a single move without some fixed plan; and let it be as simple as it possibly can be, so that a very moderate amount of skill, and care, and expense, can carry it out successfully. If your aim be to cultivate fruits, choose a small list of such as are noted in your district for their thorough adaptation to its soil, climate, &c. (Eschew *new* sorts, no matter how imposing the name or how tempting the description.) The management of these for a year or two, if you observe closely and avail yourself of all sources of information, will enlighten you greatly upon the culture of fruits in general; you will be able to appreciate what you have and what you need, and you may safely extend the field of your culture and experiment. To cultivate fruits successfully and pleasantly, one needs possess a great variety of information, both general and special: the nature of soils and manures, and their influence upon the various species of fruits; the nature and influence of stocks which are grafted or budded upon; the mode of growth and bearing of the various fruits. Then, especially, the kind of soil and degree of fertility required or best adapted to each; the hardiness, growth, and productiveness of varieties; the sort of pruning and training best adapted to them; and how and when to gather the fruit, and the best mode of ripening and preserving it. On all these points much may be gathered from books; but, after all, we must study our own trees, in our grounds, before we have knowledge applicable to our peculiar wants and circumstances. We know this by experience. What might be judicious and proper at Boston, would very likely require considerable modification to adapt it to Cincinnati or St. Louis; and even more than this, the same practice would not, in a multitude of cases, be applicable in adjoining gardens. By far the most intelligent and successful amateur fruit growers within our acquaintance are men who commenced with a few well-tested, easily-grown sorts, and added other and newer ones only as their knowledge of cultivation increased. Their whole practice has been successful, and encouraging to themselves and others.

In ornamental culture we would recommend precisely the same principles, and here indeed it is, if possible, more important than in fruit culture, inasmuch as the objects grown are more varied, and involve a greater variety of detail in their management.

It is a great mistake which many people seem to labor under, that to have a fine garden they must needs have a great variety of plants. We admit that variety is a desirable feature in the embellishment of a garden; but there can be, and there are,

fine gardens without a great variety. The largest collections of trees and plants fail to yield any satisfaction, unless they are well arranged, and in the most perfect health and vigor. But it is scarcely possible for persons who have just turned their attention to gardening for the first time in their lives, and who endeavor to dispense with the aid of a professional gardener, to arrange and cultivate a great variety of plants with any satisfactory degree of success. When they do attempt such an undertaking, as they very often do, unfortunately, their first year's experience is a sad chapter of failures and misfortunes. Their seeds fail to grow; their trees and shrubs die; nothing goes right; and the seedsman and nurseryman are charged not only with their own delinquencies, which are generally numerous enough, but they have to bear the *whole* blame. Bad management or unfavorable seasons are not taken into account, because the effects of neither one or the other are understood or appreciated.

We therefore urge upon beginners the propriety of exercising great caution in making their first selections. Every tree, shrub, and plant, should be perfectly hardy, and of the easiest cultivation. New and rare trees and plants are generally those most noticed in the periodicals, and beginners are too apt to think they must have these; but in this they are wrong. Inquire not for novelties, but for old and well-tried species and varieties that have been proved to succeed everywhere and with even indifferent treatment. These are what you need; and when you have attained complete success with them, and have become somewhat familiar with the nature of the different tribes of plants, and with the principles as well as details of culture, you may safely enlarge your collection.

Among the plants used in the decoration of gardens, there are a great many genera, species, and varieties; all of which require a special culture and treatment, and without which they will not succeed. For instance, among the popular families of garden plants, we have Roses of many distinct classes, Carnations, Phloxes, Pæonies, Hyacinths, Tulips, Lilies, and a multitude of other plants considered indispensable to a good garden. Now, if a beginner will at his first essay procure a collection of all these, nothing can be more certain than his failure and disappointment. Far better that he should commence with only one; and we will say Roses, for an example. But among Roses we have many classes, each requiring a treatment of its own; and in every class there are varieties known as vigorous growers, free bloomers, and of easy management in general, while others are notoriously uncertain. Now the beginner should confine himself entirely to such as are least difficult to manage. A fine display can be made with even two or three sorts of Roses grown in perfection. From among the classes known as summer Roses, including Hybrid China, Provence, Moss, &c., certain varieties may be selected that grow as freely as Willows, and that no one could fail with who would give them good soil, and cultivate them as well as they would a hill of potatoes. So among the popular class called Remontants, or Hybrid Perpetuals, there are vigorous growers, such as *La Reine*, *Baron Prevost*, &c., that may always be relied upon. We would plant entire beds of these reliable sorts, and have a magnificent show, rather than select a great variety, and have a rose-bed resemble a rose-hospital. The gardens we always derive most pleasure and instruction from, are



those in which a small number of plants or families of plants are well grown. Few amateurs become famous as cultivators, either in this or any other country, except those who confine their attention to a small number of objects. In Europe, we hear of one man famous for his Roses, another for his Pelargoniums, another for his Pansies, another for Tulips, &c., and people will travel hundreds of miles to witness the perfection to which each of these has attained in his special department. It is thus that all classes of plants have been improved and brought to their present state of perfection. Until amateurs in this country direct their attention more in this way to the culture of special objects, we shall not see very great improvement in any particular department, nor will we have many novel varieties of home origin. Professional cultivators, as well as amateurs, with us, aim generally at too much to do it well, or as it should be done. A nurseryman or florist of small means would, we think, do much better by confining his attention to some special culture, and make himself famous in it, rather than to dabble in all, and do none properly. In France there are Rose-growers who devote their whole attention to Roses; and purchasers in every part of the world look to them for supplies. Very large establishments only can with advantage embrace a general culture, because they can make each department a special one, and manage it as if it were a separate concern.

Gardening with us is but in its infancy. Every year thousands of persons are turning their attention to it for the first time, and without any guide or preparation. It is not surprising, therefore, that great errors are committed, and losses sustained. We think we have touched upon one of the most prevalent errors; and we would be glad to have a chapter on the subject from some of our amateur correspondents, who can write feelingly from experience. The season for bedding out summer-flowering plants in masses, according to the prevailing fashion of modern gardening, is at hand, and the suggestions we now offer may be entitled to some consideration in directing the choice of plants. Those who have little time to devote to the garden, will always find their pleasure and profit promoted by choosing not a great variety, but such things as are easily managed.

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## THE NEW CONIFERÆ.

BY HENRY W. SARGENT, WODENETHE, FISHKILL LANDING, N. Y.

SOME three years since, I think, at the request of Mr. DOWNING, I sent him for publication in the *Horticulturist* some memoranda respecting the effect of our northern winters upon the new evergreens. It may not be unacceptable to such of your readers as are interested in this matter, to give them the result of my increased experience in the cultivation of these trees.

I would premise, in the first place, that the past winter has been a peculiarly trying one upon every species of tender or half-hardy plant. There have been great and frequent alternations of temperature, and the ground being often unprotected by snow, the



alternate freezing and thawing upon the surface has had an additional effect. Notwithstanding these disadvantages, my trees have gone through with the following success :

*Abies Brunoniana* — Tender.

*Abies Smithiana* — A good deal browned ; most of the foliage has fallen, though the buds seem good. At Mr. Hogg's gardens, at Yorkville, this variety seems hardier than the Deodar.

*Abies Douglasii* — Uninjured ; foliage quite green, and buds perfect.

*Abies Menziesii* — Hardy ; untouched.

*Abies Picea* — Perfectly hardy.

*Picea cephalonica*, *Pinsapo*, and *Pindrow* — All perfectly hardy.

*Picea Webbiana* — Leader gone ; otherwise uninjured.

*Picea nobilis* — Uninjured.

*Picea pectinata pendula* — Perfectly hardy, and promises to be very distinctive.

*Picea Clanbrasiliana* (Lord Clanbrasil's) — Hardy ; but seems only a stunted variety of our native Double Spruce.

*Picea Pichta*, *Normandii*, *Frazerii* — Entirely hardy.

All the above varieties of the Silver Fir are very desirable, and I should say unquestionably hardy.

*Pinus Pinaster*, *Cembra*, *pumilis*, *Lambertiana*, *Gerardiana*, and *maritima* — All hardy.

*Pinus excelsa* — Hardy. This is beginning to be so well known, that it is hardly necessary perhaps to say anything in favor of its gracefulness and beauty.

*Pinus ponderosa* — Hardy. Grows with great rapidity, but resembles in foliage and habit the *Pinaster*.

*Pinus Coulteri*, *Devoniana*, and *macrocarpa* — These three promise to be among the most extraordinary of Pines. The foliage is six to eight inches long, of a peculiar green, and there is an exotic look about them that arrests attention. They have been entirely uninjured this winter, though their first year out.

*Pinus Sabiniana* — Hardy this winter, though previously it has suffered. A superb tree.

*Pinus Hartwegii*, *Montezumæ*, *patula macrocarpa*, *Laricio Calabria* — These four were planted so late last season, that I thought it more prudent to take them up. I am therefore unable to speak of their hardihood from my own experience. The former I have seen at Dropmore (Lady Granville's) ten to twelve feet high.

*Juniperus tamariscifolia*, *alpina*, *Hibernica*, *communis pendula*, *recurva*, *Bedfordiana*, *excelsa*, *fastigiata* — All hardy.

*Torreya taxifolia* — Hardy, and one of the most desirable of evergreens.

*Cupressus macrocarpa* — This seems to be very highly esteemed in England for its beauty, but it has not withstood our winter.

*Cupressus pendula* — One of the most beautiful of small trees. Hardy.

*Cupressus horizontalis* — Hardy.

*Cupressus funebris* — There still seems to be a question whether the so-called Funereal Cypress is not after all a *Juniperus*. My plants have for the first year or

so resembled Junipers; but as they get up, the character changes very much to a Cypress. I am not sure of the hardihood of this tree. My best specimen was killed last winter, though an inferior one is uninjured, except the tops a little brown.

*Cedrus Libani* — Perfectly hardy when well established.

*Cedrus Deodara* — A little tender the first or second winter; afterwards apparently uninjured by the severest cold.

*Cryptomeria* — My experience has been with this tree, that it suffers more from over than under protection. My best specimen, some twelve feet high, was destroyed during a mild winter from too much and too close covering, though it had gone through a much severer one with the slightest protection. I am quite satisfied that in my latitude they should be on the north side, and in the shadow of houses or woods, to be entirely successful.

*Sabina communis* and *variegata* — Both hardy.

*Araucaria imbricata* — This stands perfectly well with me on the north side of a wood, if planted on a mound, so that the water runs from the roots on every side, and in about two-thirds of Rockaway (white) sand to one-third leaf-mold.

*Taxodium sempervirens* — I have abandoned this as too rapid and succulent in its late growth for our climate. I think it would stand very well at Baltimore, and perhaps at Philadelphia.

*Taxodium horizontalis* — Hardy.

*Cunninghamia glauca* — Tender.

*Cunninghamia sinensis* — Quite hardy, and, from its resemblance to the *Araucaria*, a very desirable plant where the latter will not stand.

*Taxus baccata* (English Yew) — Hardy.

*Taxus elegantissima* — Hardy and very striking.

*Taxus pendula* — Hardy and desirable.

*Taxus aurea* — Hardy and curious.

*Taxus adpressa* — Doubtful.

*Thuja filiformis*, *Chinensis*, *plicata*, *Tartarica* — All beautiful and hardy.

*Podocarpus lateralis* — Killed.

*Libocedrus Chiliensis* — Killed.

*Euonymus fimbriata* — Killed.

There are two acquisitions to our evergreen shrubs which I desire to mention here as well worthy the attention of amateurs. They are, *Ilex latifolia* and *Ilex laurifolia*. It was the impression of Mr. DOWNING that the *laurifolia* was the only *Ilex* that would generally stand our climate. At his suggestion I imported some, and they prove entirely hardy. I can say the same, or nearly so, of the *latifolia*, which, having a leaf like a Camellia, only larger, will prove the greatest possible acquisition.

Among the Rhododendrons, WATERERS' hybrid *catawbiensis* (100 plants of which, in forty odd varieties of bloom, he sells for £10,) are also great additions to our evergreen shrubs, being perfectly hardy, and blooming the year of importation. So also will be the eighteen varieties of Sikkim Rhododendrons, if they will stand our climate, an experiment I shall make another winter.

The *Andromeda floribunda* does very well with me, and has quite a pretty white flower.

The different Mahonias are too well known now to need further commendation.

Among the things I have imported this spring, with a view of acclimating, are *Garrya elliptica*, *Skimmia Japonica*, *Stauntonia latifolia*, *Cedrus Deodara viridis*, *Cryptomeria viridis*, *Cryptomeria nana*, *Berberis Darwinii*, *Fitzroya Patagonica*, and *Saxe Gothæa conspicua*. My success with these I may perhaps have the pleasure to communicate to you on some other occasion.

[This paper of Mr. SARGENT's presents the results of the most extensive and carefully conducted experiment that has been made, to our knowledge, in America, in the cultivation of rare or recently introduced evergreen trees. With untiring zeal, and regardless of cost, he has for many years been collecting every new evergreen tree that has been announced as in any degree likely to endure this climate; and here we have a full account of his failures and success so far. To gentlemen improving their grounds or forming arboretums, to nurserymen, and in short to all who feel interested in arboriculture, the information is invaluable. The list we have here of those which have proved perfectly hardy, embracing as it does the greater number of the noble Pines and Firs of northwest America and the Himalaya, shows what ample resources we are to have in forming plantations both for utility and ornament.—ED.]

## THE DAISY CHRYSANTHEMUMS.

BY W.

WHO has ever seen the beautiful Daisy Chrysanthemum, without admiring it, and desiring to add to his own collection a few plants so gemmed with bud and blossom in October, November, and December? We have few plants that bloom so well as the Chrysanthemum, and that can be so neglected for half of the year and suffer so little. The flowers appearing, too, just at the time when most needed to relieve the dreariness of those months so full of sad remains, of falling leaves and fading flowers.

Yet it requires some little experience to cultivate this beautiful plant, with entire success. In one book you will be told to "pinch out the tops to make them break," and in another to avoid the same thing from fear of preventing their blooming. Some recommend the "one shift system," and others to change them often from small pots to larger, as they increase in growth. It may be that in each of these different ways they have been cultivated so as to display much beauty, because they have been cultivated with care and attention. But I have a little "*experience*" to give, and hope that others, as well as myself, may derive some benefit from it.

Four years ago I began to cultivate the Chrysanthemum—the large or Indian variety. The first year, from eight or ten plants we had *one* beautiful flower. The second year we were quite well pleased with our success, having, perhaps, about twenty,



from five or six plants. The third year, (1852,) we added to our collection five or six of the Daisy or Pomponé variety. The plants were potted early in the season, and many of them repotted occasionally. From necessity they were placed with other plants in the shade of a large building, where they had the sun for a very short time in the morning, and for one or two hours in the evening. The plants seemed to grow finely, not losing their leaves, but retaining them to the rim of the pot, so large and green, they seemed to be very perfect as well as beautiful. But when the time came to look for flower buds there were but few to be seen. Still we hoped on until the 23d of November, when, from fifteen or twenty plants we had *fourteen* flowers in all, on *five* plants—one of them was a Daisy Chrysanthemum, with *three* flowers. There was after all quite a large number of buds, but they all, with those few exceptions, came to nothing more.

The fourth year, (1853,) it was determined to keep the plants *out of the shade*. Though other plants did finely, it was very evident it was no place for the Chrysanthemum. As our grounds were not inclosed sooner, we were unable to get them out until the 23d of May. They were taken from the house and planted in a warm, sunny exposure. Some shoots that had become quite long were layered, and soon striking made fine bushy plants. Other shoots were cut in pieces of about three inches, and the cuttings were planted in the open ground, (where they soon strike without the protection of a glass or shade, if the ground is kept moist). They were not potted until July, August and September, in the pots in which they were to bloom, with no drainage at all in the pots; kept in the shade for a day or two; they were again removed to a warm sunny spot, and the pots were placed on boards which rested on the ground. In September, October, and November, they were occasionally watered with a weak solution of sulphate of ammonia, (half an ounce in a gallon of water). The latter part of September, from fear of frost, they were removed to the house, and began to bloom about the 20th of October. Some might have been bloomed sooner, had they been placed in a warm room. But in November and December some of them were a mass of bloom, and they generally retained their foliage to the rim of the pot. One plant, "*Autumna*," about twelve or thirteen inches high, "according to measure," had ninety-five blossoms; besides which there were buds and imperfect flowers. The large varieties, as *Temple of Solomon*, *Jenny Lind*, *Fleur de Marie*, *La Reine d'Or*, &c., bloomed finely, also.

A few plants were left out for trial, and in a warm, dry place under the windows. *La Gitana*, *Poulidetto*, and *Sacramento*, bloomed about the middle of November. The climate is much colder than that of Rochester.

So much of "experience" Now permit me to give a little advice. If you would like to bloom them in the open ground, put them in a *dry, warm border*,—under your south windows would be a good place, if there are no trees in the way to hide them from the sun. Some of them bloomed earlier than others; for instance, *Sacramento*, *Autumna*, *La Gitana*, *Solfature*, *Poulidetto*, &c., all pretty, and good bloomers, within doors or out.

If you would like to bloom them in your parlor or greenhouse, in May take strong

cuttings from those in the open ground, place them in the sunniest spot in your garden, where they can remain until August or September, allowing them, of course, plenty of room. In such a place the plant will break freely and have a fine, bushy top without pinching at all; and these plants will retain their lower leaves better on account of being in the open ground. Or, when your cutting begins to grow, you may cut it off within an inch of the ground, and it may become still more dwarf, and perhaps have a large number of flowers. Pot them in August or early in September, in good, rich mold; water once a week with manure water, or a solution of sulphate of ammonia. If they mildew, syringe them with sulphur water; or, if you have no syringe, just before a shower comes on, sprinkle them well with sulphur. Remove them to the house before there is danger of sharp frosts, but keep them out as long as you can, especially if they are intended for the parlor. After two or three hard frosts perhaps they might safely remain out for one or two weeks. After this, a south window in the parlor is probably the best place for them. In December or January, after the bloom is over, you can put your plants in a cold, frosty room; and if you want the pots, turn the plants out and place them close together, cutting off the tops, of course. Or, if you have the heart to do it, throw your plants away, and return to your garden in the following May for a fresh supply. In this way you have the plant in pot about three or four months, and that at the time when you think less of the trouble on account of the flourishing buds and beautiful blossoms.

[W. is an amateur cultivator who has been eminently successful. Whatever he says is entitled to the fullest confidence.—Ed.]

## THE CULTURE OF SWEET POTATOES.

BY C. E. GOODRICH, UTICA, N. Y.

I HAVE recently noticed frequent inquiries on the culture of the Sweet Potato. Having had some little experience in this branch of horticulture, I will briefly state the mode and the results.

*Source of Seed.*—This I always procure from the city of New York, to which it is, I suppose, in all cases brought from further south. I sometimes send directly there for it, and at other times procure it here from grocers who have recently procured it for retail here. Potatoes raised here are always too imperfectly mature to be preserved; they perish with a dry rot even when stored in small quantities, in dry sand, and in a cool and airy place.

*Soil.*—I have cultivated them in a light sand, a sandy loam, both of moderate fertility, and in moist rich sand. I prefer the former, because it secures a slower growth and results in the earlier formation of tubers, and of course in a more perfect maturity than either of the others.

*Mode of growth.*—The vine and leaf somewhat resemble a Bean trailing over the

ground. Perhaps it still more resembles wild Buckwheat, though its leaf is larger and a yellower green. The vines often make eight feet in length in a rich and moist soil, though usually four feet is as long as is desirable. In rich soil and moist weather they frequently throw down roots at intervals along the vines, which produce tubers at these points, and so fill the whole soil with tubers. This, however, is not desirable, as these scattering tubers are usually very imperfectly ripened. The tubers almost always stand up lengthwise in the soil, instead of lying horizontally, as in the case of the common Potato.

*Preparatory Culture in the Hot-bed.*—Having procured your seed tubers, bury them in an ordinary hot-bed, about the 20th of April in Central New York. Place them lengthwise, and nearly end to end, in rows across the bed, the rows about six inches apart, covering them about three inches deep with soil. In two or three weeks, according to the heat of the bed, each tuber will throw up from five to thirty sprouts close to the side of the parent. As soon as these are three or four inches high, take up the tuber carefully and break them off close to the parent, so as to save the side roots. The tubers may then be replaced for the production of a second and even a third crop of sprouts. Some prefer breaking them off in the ground, but I have always found it safe to take the tubers quite out of the ground for this purpose. This method of procuring plants is practiced even in the Southern States, since otherwise too many shoots would be produced. With us this mode becomes further indispensable as the only means of getting our plants sufficiently early.

*Mode of Culture in the Field.*—Plow your ground, and throw it into ridges five or six feet apart. This is needful—first, because your tubers, needing to spread side-wise, will form more readily than when penetrating deep into the soil; and secondly, they will thus be less likely to form roots along the vine. Set the plants on the ridge, about fifteen inches apart, inserting them in the soil just as though they were Tomato or Cabbage plants. Should the weather be hot, cover the newly set plants with any large leaves, as of Pie-plant, Balm of Gilead, &c. Hoe frequently until the vines cover the soil, but without increasing the height of the ridge. In wet and hot weather, it might be useful slightly to lift up the plants with a long, smooth pole, to prevent them from rooting.

I have not observed that the Sweet Potato is liable to disease, otherwise than, as a tropical plant, it fears cold and rainy alternations of weather.

*Digging, Yield, Mode of Preserving, &c.*—Dig as soon as the vines are killed by the frost. Spread the tubers thinly on a dry, cool floor, where they may often be preserved for gradual use until midwinter.

I am not prepared to speak very positively of the yield. Undoubtedly it will usually be less than that of ordinary Potatoes. In the hot, moist season of 1851, however, the yield was very large, and the whole cost of production not more than that of ordinary Potatoes by the bushel.

*Quality.*—Here, after all, is the failing point of this crop. In a dry, warm season, when grown in rather poor, sandy soil, they are often quite eatable, and are very acceptable to those not accustomed to those produced at the south. Often, however,



they are quite watery and stringy—so much so as to be utterly uneatable to all who have ever used a good article. For this reason I would not advise their culture as far north as Central New York; not at least until you strike the shores of the western lakes, where the summer is from two to four weeks longer, and allows the plant a proportionally longer period to mature its tubers.

I have written the preceding directions, not to encourage their culture, but to aid those who are determined to try that culture for themselves. Some of my directions will seem quite unnecessary to those familiar with their culture.

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## PROPAGATION OF TREES.

BY M. W. PHILIPS, EDWARDS, MISS.

I HAVE written nothing about Horticulture so long, that I feel almost ashamed to begin again. Yet I do not know but it is as well for me not to begin. For the past three or four years, I have been so much engaged in other fields of exertion that I have not read as much in either Horticulture or Agriculture as had been my custom for twenty years, and the little I have read, some four or five Agricultural papers, contains so much of new—to me—principle that I am behind the age. I am therefore fearful that I may run foul of some exploded doctrine; this, to me, would be awful, as I detest the cognomen of fogyism so much.

I have been trying two modes of grafting, which I see not laid down, by writers, and have so well succeeded that I wish to give it forth, and inquire of you what you think at least of the first, viz:—

Having been advised by two or three plain country folks, to try laying the entire scion in the earth, with the top end only out of ground, inserting grafts every eight to twelve inches, I tried a few Apples last year. I succeeded as well as with any mode of grafting I ever tried. The plan:—I took a long straight scion, say five to eight feet long, laid it upon a stout solid plank, and with a hammer and half-inch firmer chisel split through the stock about every ten inches, in which I inserted a graft already prepared, wedge-shaped, thrusting through the stock, then buried in the earth, leaving grafts and top end out of the earth. I had over five feet growth,—a bad year for growth, and in a situation shaded at least one-half the day. What I desire is, to know whether trees thus grown will probably do as well as others? I have seen objections made to root grafting, another favorite method of mine.

I am told that Peaches, grafted as above, do equally as well as Apples. I have tried a few Pears this year, for curiosity.

My second mode, and from whom I learned it, I now forget,—is, to cut scion and graft as for splice grafting, and split down on face of splice and make a tongue, cutting nothing out; and then thrust the grafts down so that the tongues enter each split. I have done thus upon grafts and stock nearly one-half inch in diameter. Upon small stock and grafts, I can prepare as many or more grafts as in wedge or cleft grafting,

and less labor to prepare the stock; as in heading down, the slope is made, and then a quarter or less split finishes. I then use grafting wax spread on cloth and torn into one-quarter to one-half inch strips. I think I can put as many in, this way, as any other plan I have tried. In the first mode, nothing is used around the graft, the roots putting out from graft as well as from stock. I presume it to be fully as good as layering.

I have used another mode somewhat between budding and grafting, on the Peach. Our seedlings bud out full two weeks, usually, before the improved northern varieties. When seedlings are about one-fourth to one-half inch in diameter, I head down with a short sloping cut; on the highest edge of the cut I split down the bark, say in March, when the leaves are half an inch or so long, bark slipping readily; then with my graft cut as for splice grafting, I thrust it down the stock and wrap with my waxed cloth. The trees are ready to transplant that fall and winter, often growing ten feet high, on rich land. I usually do this on the stock on which the bud inserted the fall before had failed, and thus fill up all vacancies. I do not know how the first and last will do for you, and only give them as what I have learned from home folks.

It may be that our climate is better suited, than yours, but it is certain that on favored soils, that we can grow many of our fruits from cuttings alone. I can show several, Peach, Plum, Apple, and Pear trees produced in this way. I give none of this as new; I never discovered any thing in my days; my talent lies more in imitation; invention is not for me. If this can avail aught towards good, I will be content.

P. S. Peaches have now (March 23d) done blooming, Pears in full bloom, Apricots and Cherries, also. Apples blooming, Cabbage Plants set out, Peas in bloom. Beets some two inches high, Radishes in plenty, Corn up, and some are planting Cotton. Turkies (wild) now gobling, tame are setting, Geese and Ducks setting, Chickens out by scores, and forward, Ducks hatched out. Fine Hyacinths about gone, Roses beginning, Spireas gone, Evergreens, Spruces, Pines, Hemlock, Yew, Boxes, Euonymous, &c., growing, Horse Chesnut one foot growth. So much for lat. 32½. How of yours?

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## PRUNING AND MANAGEMENT OF THE PEACH TREE.\*

169. FIFTH PRUNING.—*Sixth year of planting.* The operations of the fifth pruning are exactly the same as those of the fourth. The extremities of the four branches A, B, C, D, are pruned to an equal length, and in proportion to their growth. We must carefully watch all the shoots on the upper sides of the branches, especially those on the two main branches, where the sap produces the strongest shoots, and which must be controlled; but the suppressions ought not to be too considerable, because the sap must be employed, lest its superabundance should cause disorder. We must endeavor to replace too vigorous shoots by the young ones that spring

\* Continued from May number.

from their bases, or occasionally by a lateral; so that vegetation may still go on, but under circumstances that may admit of the growth being so regulated, by pinching, as to prevent over-luxuriance. Besides, much trouble may be avoided by lengthening the pruning, and restraining the vegetation, by nailing close to the wall.

170. At the time of the second disbudding, I choose, on the upper side of the main branch, three fruit-branches which have already received one or more prunings. The three branches should be at equal distances, of the thickness of a quill, and, respectively, originating lower down the main branch than where each of the lower secondary branches takes its rise.

From these three branches, which are intended to become the three upper secondary branches, E, E, E, I take off all the useless young shoots situated in front and behind; and I make choice of one for a leader which, without being too vigorous, appears well conditioned. I winter-prune it to a wood-bud, and nail it somewhat more upright than the other fruit-branches, and so close to the wall that its growth may be moderate, and any disposition to the contrary must be checked.

171. This preparation for establishing the three upper branches, E, E, E, is not made till the following year in trees which have made only weak shoots, and in those of which the lower branches do not appear sufficiently strong; but then the tree is not completely formed when eight years old.

172. SIXTH PRUNING.—*Seventh year of planting.* It will be perceived, by referring to fig. 11, that the main branch, A, bears three branches, E, E, E, on its upper side, which are much more developed than any of the other productions on that side. These three branches are the ones preserved at the disbudding of the preceding season, and which are now becoming the three upper secondary branches. If it was not possible to form these the preceding year (170, 171) they must now be originated.

173. The pruning of the fruit-branches, and successional shoots, and the treatment of the young ones, by disbudding and pinching, are still carried on. The same course is adopted with regard to the four branches, A, B, C, D, the extremities of which are shortened back at the winter-pruning.

174. With regard to the three branches, E, E, E, their leading shoots are pruned, for the first time, by shortening them to wood-buds, situated at heights proportionate to the respective conditions and state of growth of the shoots. If any of them have blossom-buds, the shoots must be pruned to a wood-bud above the blossom-buds; and care must be taken to disbud, as soon as they push, all wood-buds situated below the flowers, with the exception of one or two wood-buds that are nearest the base of the shoots. Immediately after pruning, the three secondary branches, E, E, E, are nailed obliquely, tightening the shreds more or less as is needful; and afterwards all the young shoots that are retained are nailed in the same way. During the growing season, the progress of the leading shoots is watched, and they are pinched when necessary. Their laterals are also pinched to six or eight leaves. In short the growth of the branches of this part of the tree and that of their shoots must be particularly attended to lest they impoverish those below; the upper young shoots must be nailed as soon as possible, in order to keep the sap in the lower parts. If, notwithstanding



these precautions, the leading shoot becomes too strong for the others, it must be cut on a lateral, situated in front, which must be immediately nailed in the proper direction, and close to the wall.

175. SEVENTH PRUNING.—*Eighth year of planting.* This pruning is, in every respect, like the preceding. The main branch *A* (Fig. 11) is pruned for the seventh time; the branch *B* for the sixth; *C* for the fifth; and *D* for the fourth time. The secondary branches, *E*, *E*, *E*, are pruned for the second time since their formation was commenced, without counting the prunings on the fruit-branches from which they have originated. By designating all the principal branches by the letters of the alphabet, the whole course of proceeding can be seen at a glance, as the order of the alphabet also shows that of the formation of the branches. Thus, the letter *A* indicates the main branch that was first formed; whilst the three upper secondary branches are marked *E*, *E*, *E*, they being formed the last, and all three at one time.

176. The management of these three last-named branches is similar. They should always be nailed the first; and should be several times disbudded, and their shoots likewise pinched whenever it is necessary to do so. The essential point is to leave sufficient outlets for the sap, so that it may not open fresh ones by producing over-luxuriant shoots and laterals, which would monopolize an undue share of nourishment and impoverish the lower branches of the tree. The suppressions on the upper branches are made with the intention of checking the sap, so that it may nourish the lower parts of the branches, which, notwithstanding, sometimes remain inactive. We should, however, recollect, that the vegetation of the Peach tree being incessant till the end of October, in ordinary years, it is always possible to remedy disorder by adopting proper means when it appears.

177. EIGHTH PRUNING.—*Ninth year of planting.* Conducted during eight years in the way explained, and no accident happening to it, the Peach tree acquires at this pruning the form of a long and regular parallelogram. Fig. 11 represents the principal branches of a tree planted twelve years. The marks show the number of prunings which each branch has received; and the figures indicate the years in which the respective cuts opposite to them were made, reckoning from the second year of planting. Thus, the first cut on the branch *E* is marked 6, denoting that it was made in the year corresponding with that in which the main branch, *A*, received its sixth winter-pruning.

The tree covers a surface of about twenty-six feet in length and eight feet in height, and the extremities of the four branches, *A*, *B*, *C*, *D*, touch the same perpendicular line, whilst those of the three upper secondaries touch the same horizontal line as the extremity of the main branch, *A*. In other respects, the eighth pruning is the same as the seventh. The fourth upper secondary branch, being formed at a later period, does not exist at the eighth pruning.

178. The main branches are everywhere regularly furnished with fruit-branches. The tree, complete, as figured in my work, exists in my grounds; and it may be seen there, together with other thriving specimens which present the same regularity. Those Peach trees which were fully formed in 1841 are still as regular and vigorous

as ever, proving by their results that my method of square training is not only easy of execution, but durable in its effects. This is an advantage which those who treat on training do not always possess, and who would be greatly perplexed to show living examples of trees trained in accordance with their principles, although they may have had trees engraved as if such had been actually in existence.

179. During the ninth year from planting, the growth of shoots more or less vigorous, which will be developed on all the branches, must be watched, so as to modify and govern it according to the state of the tree, by means of pinching, disbudding, and nailing.

If, during the summer, any of the terminal shoots, E, E, E, grow too long, summer-pruning must be employed. The leader must be cut back on a lateral placed in front, and which is nailed in the best way to counteract its growth, and to keep these branches within their prescribed limits, as they are always more inclined than the others to grow too strong, owing to their almost vertical direction.

## II. *The Pruning of the Peach tree in the Square Form after its formation is complete.*

180. Having explained the various annual operations by which the complete formation of the tree is effected at the eighth winter-pruning, it is now necessary to state by what means its regularity, as well as its productiveness, may be maintained, during the fifteen or twenty years which it may be expected to live.

181. At each year's winter-pruning, the branch that has borne fruit is cut off close to the one trained to replace it, and the latter is shortened to a wood-bud situated above several blossom-buds. Sometimes this successional fruit-branch is necessarily left much longer than we could wish, owing to the flower-buds being situated near the top of the shoot. This is frequently the case on the upper sides where the strongest shoots have more wood-buds at their bases; but it need not cause us any uneasiness, as we are sure of being able to remedy it at the following pruning, and we can, by leaving the shoot long, obtain one or two Peaches, of which we would otherwise have been deprived. Besides, the shoot may be pruned immediately above a flower-bud, as stated (96). By thus maintaining on the principal branches well-conditioned fruit-branches and young wood to replace them, it will be perceived that the sap is forced to distribute itself equally, and that it is prevented from running through all the sap-vessels of the principal branches so rapidly as only to leave badly-elaborated juices. During the existence of the tree, the pruning of the fruit-branches is always the same; and disbudding and pinching are the regulators by which we can conduct the development of these branches at will (87—96).

182. With regard to the principal branches, their pruning ought to be governed by two principles. The first is to encourage the prolongation of the branches A, B, C, D; the second, on the contrary, is to restrain as much as possible the growth of the extremities E, E, E. These two opposite means mutually assist each other. In fact, it may easily be conceived that, in consequence of the elongation of the extremities

A, B, C, D, producing young shoots and leaves, these branches attract a greater quantity of sap than flows to the upper secondaries, checked as it is at the same time by obstacles opposed to the growth of the latter, and thus inducing its flow towards the extremities A, B, C, D, thereby contributing so much the more to their growth.

183. Therefore the four last are pruned as long as possible, in order that their points may regularly touch the perpendicular line drawn from the top of the wall to the earth. The only limit to this elongation is the height of the wall which prevents the branch A from attaining a greater length than that at which it touches the under side of the coping; and which, consequently, obliges us to keep the three secondary branches, B, C, D, in a relative proportion, so that their extremities, when nailed, may not extend beyond the perpendicular line falling from the point of the branch, A.

184. When it has reached the coping, there are three modes of proceeding. 1st,—By the annual cutting back of each of the four branches A, B, C, D, on shoots proper for replacing the extremities of the branches shortened back. These shoots are each pruned on a wood-bud suitable for a leader. This is the way generally adopted; and must necessarily be so when, as has been pointed out (59), the Peach trees are only twenty-six feet apart, and consequently there is no more space for the extension of the branches.

185. 2d,—By the annual cutting back of the branch A only, which must be treated from that time the same as will be directed at 187 for the branches E, E, E, and by the equal elongation of the branches B, C, D, until the branch D, in its turn, reach the coping. But, to employ this method, there must be certain conditions not always to be met with. It will be understood that the elongation of the lower branches is a secondary consideration to that of their being maintained in good condition; and that they should always be well furnished with young wood; for if they were prolonged without care being taken, it might prove injurious to the vigor of the lower part of the tree, and produce ugly gaps. Therefore, the elongation of the four branches A, B, C, D must be proportionate to their strength; and when they are weakly, they must be kept shorter, by every year cutting back their extremities to a lower shoot, which, with proper nailing, forms a new leader (184). This proceeding concentrates the sap for the better nourishment of the lower parts, and for the producing in them a more active state of growth. But if, on the other hand, the growth of the tree is so vigorous that the lower parts are healthy, and the principal branches there well furnished with fruit-branches, there is no danger in treating the branches A, B, C, D as has been explained in the beginning of this article, and thus we may even be able to give each wing an extent of twenty-feet—a proportion that cannot well be exceeded on walls ten feet high; and this does not prevent us from keeping the tree in the form of a long parallelogram forty feet in length by ten feet in height. But the second method, which can be very seldom resorted to, requires that a greater distance between the trees be provided for at the time of planting. It will be easily understood that the equilibrium of strength and growth is more difficult to maintain in a tree disposed in this way, the lower principal branches being only three against four upper ones; and, therefore, I do not recommend the adoption of this method.



186. 3d,—In carrying successively the depression of the main branch, A, to its utmost limit, its length relatively to the extremities of the three lower secondaries must, however, be maintained. This extreme lowering of the main branch, which thus ceases to divide the wing into two equal parts, still more increases the distance from each other of the upper branches, E, on each wing; and there would be a great space left between them if a fourth upper secondary (F,) were not formed.

It is obtained, as stated at 170, by the prolongation of a fruit-branch chosen at the base of each of the two innermost branches E.

This method is preferable to the second (185), but it should only be employed on trees that are very vigorous, especially in their lower parts; and in those in which a greater number of outlets for the sap can be afforded.

187. The pruning of the upper branches, E, E, E, consists in cutting each of them back every year, at the winter-pruning, on a fruit-branch, the shoot from the terminal bud of which replaces the extremity of the branch. This shoot is nailed as closely to the wall as possible, in order to restrain its growth. If this branch be shortened to a wood-bud, care must be taken to nail it as soon as it is sufficiently developed to admit of its being fastened. The extremities of the three upper branches should, after the winter-pruning, be at the distance of eight or ten inches from the coping.

188. Notwithstanding the constraint imposed on these upper extremities, they soon begin to grow rapidly; and we must take care, first to pinch them, afterwards to cut them down on the lowest lateral which the pinching produces; and, lastly, whenever one of them approaches too near the coping it is cut down at a summer-pruning on a lower shoot, or on a very slender branch of old wood, which is nailed in as soon as possible, and which becomes a new terminal. Attention to these shortenings is required during the time vegetation is going on; nevertheless if they prove ineffectual, and the branch gain the ascendant, it must be cut down at the following winter-pruning to a small fruit-branch, situated at its base (170), which is pruned and nailed as there directed. It is of course understood that disbudding and pinching are performed on the shoots of these upper branches, and that they should all be nailed as soon as it is possible to lay them in. They are pinched when necessary, and summer-pruning is employed for dispensing with the crowd of laterals which results from the pinching, cutting them off to the lowest lateral. All these precautions are necessary for producing and maintaining a supply of fruit-bearing branches on the three upper secondaries, E, E, E, of each wing.

The omission of these operations is often the cause of gaps in Peach trees. The treatment of the upper secondary branches is the same throughout the life of the tree. Lastly,—As repetitions must be made in order to draw the attention of the reader to the fundamental principles of the pruning of the Peach tree, I will conclude by stating that its success depends on the care of the cultivator:—

189. 1st,—To form well-nourished main branches, A, A, each tapering from its base to its top without inequalities even at the place where pruned. This result is obtained by training and nailing.

190. 2d.—To obtain lower secondary branches of a proper relative strength; and, like the main-branches, perfectly straight, and tapering, without swelling or knots.

191. 3d.—Not to form the upper secondary branches until the lower ones are so well established, that there may be no danger of their being impoverished by the upper secondaries depriving them of the necessary sap. Rather than run the risk of this, it is better to delay their formation for a year, or more.

192. 4th,—To take advantage of all the eyes, or young shoots, which grow on the upper or under sides of each branch, in order to furnish it properly with fruit-branches and successional shoots; and to destroy all the eyes which push in front of the branches as soon as they make their appearance, in order not to leave unsightly scars. Those produced at the back of the branch are likewise taken off, unless there is a vacancy to fill up, in which case they are preferable to those in front. The shoots resulting from these eyes must be nailed so as to bring them gradually to the side.

193. 5th,—Lastly, in order to insure these results, to make a proper use of the means, which are presented by disbudding; by pinching, which should not be too liberally applied; and by summer-pruning, so useful for concentrating the sap in the base of the successional shoot. Neither must we forget the importance of training the principal branches in a perfectly straight direction, this being favorable to the circulation of the sap; nor that of nailing, the effects of which have been treated on, according as it is loose, or otherwise, and whether it keep the branch in an easy or confined, a vertical or inclined position; the importance of shading the strong part to retard its growth; and that of budding and inarching when there is no more natural means of producing a shoot where it is wanted. In thus operating with care and intelligence we will generally obtain trees of regular form, having the bark of the principal branches fresh and nearly smooth, indicating perfect health. They will be well-furnished with fruit-branches at regular distances, and their crops will also be regular and abundant.

## FRUIT CULTURE IN MASSACHUSETTS.\*

A STRIKING characteristic of the agriculture of the present time, as compared with that of a former period, is the much greater attention now paid to the cultivation of fruit. The early settlers made some attempts to introduce the best varieties of Apples and Pears known in the mother country when they left it. For this purpose, some brought with them the seeds of these fruits, but, to their astonishment, they found that the product of the trees which sprung from them was very different from what they expected, and in many instances inferior to the fruit from which the seed had been taken. They did not understand how this could be, as they did not know that the seedling is often inferior to the fruit whose seed is sown.†

\* From the *First Annual Report of the Secretary of the Massachusetts Board of Agriculture.*

† The first fruit raised, was on Governor's Island, in the harbor of Boston, from which, on the 10th of October, 1639, ten fair Pippins were brought, "there being not one Apple nor Pear tree planted in any part of the country, but upon that island."

Their progress in this department, as might have been expected, was slow ; indeed we can hardly say that fruit was cultivated at all as a part of the produce of the farm, and with a view to profit, till a comparatively recent date. Half a century ago it would have been impossible to find the number of varieties of good fruit in the whole State, which may now be found in a single town. There were orchards, it is true, and some of them were better than none ; but this is all that can be said. Cider Apples occupied a very prominent place in the list. The *Hubbardston Nonesuch*, the *Minister*, the *Porter*, and other favorite varieties, had then no existence. Not a nursery containing trees for sale, was to be found in the State. Here and there was an instance of grafting, but it was rare, and generally no thought was given to the subject. It was regarded as absurd for any but a young man to set out trees. An incident in the life of the venerable Mr. COBB, of Kingston, not inaptly illustrates the feeling which formerly prevailed to a great extent throughout the State. At the age of seventy years, he began the work of setting an orchard. The idea was so ludicrous as to subject him to the ridicule of the neighborhood. He lived to the age of one hundred and seven, and died in 1801, having enjoyed many years the fruits of his labors. Grafted trees were now and then obtained from another State, where somewhat greater attention had been paid to raising them ; and a few orchards, nearly fifty years old, now bear some good fruit, notwithstanding the neglect and abuse of subsequent owners.

In the cultivation of fruit on the farms of this State, with reference to profit, the few great staple varieties are mostly relied on, while the choicer and more delicate kinds, which require much time and care to bring them to perfection, are left, for the most part, to the horticulturist, who is fully able to supply the limited demand for them.

To make such fruits profitable to the farmer, he should deal directly with the consumer. As things are, the producer often gets less than his proportion of the price paid, while the consumer, on the other hand, frequently pays far more than he ought.

It is the more common varieties of fruit, therefore, (for which there is, and always will be, a good demand,) that are grown on the farm.

Fortunately, the habits and character of these varieties are now pretty well known, and the farmer can judge which of them it is most for his interest to grow. He knows for instance, that certain Apples, as the *Baldwin*, produce in alternate years, and then very abundantly ; so much so, indeed, that the market is overstocked, and prices fall. The intelligent farmer would naturally make his calculations with reference to these facts, and avoid such casualties by selecting for his orchards such Apples as the *Hubbardston Nonesuch*, the *Minister*, or others of equal value, which will find a ready sale when the *Baldwin* and similar varieties are selling at the lowest prices.

The fact that these things sometimes occur, does not prove that fruit is not profitable, as is sometimes argued. If any one fails to make by it, he should rather consider it as an indication of some want of prudence or foresight on his part, and though he may not be willing to see or acknowledge it himself, it will still be evident to all who look on with a full knowledge of the fruit market.

To show how great attention is now devoted to this pleasant branch of rural economy, the following short extracts may be given.



An intelligent farmer of Franklin County, writes as follows :—"The cultivation of fruit is prospectively most important to the farmer's interest, and the farmers are just beginning to learn it; there is no other way by which land can be made so profitable as by raising fruit, and our land is well adapted to the cultivation."

The same may be said of some parts of the county of Worcester, where "fruit of all kinds has, within the last fifteen years, received great attention, and been attended with most beneficial results, yielding to the farmer the most net profit of anything that he could cultivate. Choice Apples are raised in great abundance—except this year, the new edition of worms has produced almost an entire failure."

Another from the same county, writes :—"Great attention has been paid to the cultivation of fruit, particularly the Apple, within the last few years. The soil is peculiarly adapted to fruit of all kinds, it being a deep yellow loam, and the surface greatly diversified. Peaches are generally, and in some instances extensively cultivated. Pear culture is receiving very much attention, and Quinces are raised, more or less, by every body. With many farmers the profits of the farm have doubled within the last ten years."

In the county of Middlesex, also, the farmers are paying greatly increased attention to this subject, and find it profitable to do so. A correspondent writes as follows :—"Considerable attention is given to the cultivation of fruit. There are some valuable old orchards, producing the *Baldwin* and *Hunt Russet* in abundance. Great numbers of young Apple trees have been set within the last six years, and are receiving excellent care by careful pruning and the constant cultivation of the ground. Garden fruits, such as Peaches, Pears, Plums, Currants, Gooseberries, Blackberries and Raspberries have also recently received a degree of attention unknown here, until within a few years. There is no doubt among our cultivators but that these fruits materially increase the profits of the farm."

From another town of the same county, the following return was made, showing also the great attention which this subject is receiving :—

"More attention is paid to fruit culture, than any other branch of agriculture, and with great success—especially Peaches, which thrive exceedingly well here; about 5,000 bushels were raised the past season. Apples, and other fruits do well. It is generally considered, that fruit trees pay for themselves, including care, cost of trees, &c., in about twelve years; and I think a great part of the time bestowed on an orchard is clear gain. All should plant an orchard who have land; I can assure them more profit thereby, than from any other branch of agriculture."

In the county of Hampden, though less interest is felt in fruit than in some other counties, it is now beginning to excite attention. One practical farmer writes from there, as follows :—"People have paid considerable attention to the cultivation of fruit, for a few years past, and I think with pretty good success. I have done as much in the way of raising fruit, as any man in our town, and I can say that I get more net profit from my fruit, considering the labor, than from any other products of my farm. We are seventy miles from Boston; we can pick our Apples one day, and have them in Boston market the next."

The county of Norfolk is peculiarly adapted to the raising of fruit, from the nature of its soil, its vicinity to the best of markets, and the facilities which it has for selecting the finest varieties. An intelligent, practical farmer, writes thus:—"Much attention is given to the cultivation of fruit. A good orchard of Apples, in full bearing, would probably increase the profits of a farm one-third; and where a variety of fruit is successfully cultivated, the increase of profits would be one-half, perhaps more."

Another in Middlesex County, says:—"Considerable attention has been paid to the cultivation of fruit, particularly Apples and Peaches. We send to the Boston and Lowell markets about six thousand bushels of Peaches, and, in bearing years, about six thousand barrels of Apples. We consider hay, fruit and wood, more profitable than anything we can raise."

In Essex County, fruit has received "much attention. The best kinds of Apples, Pears, Peaches, Plums, and Quinces, are raised in abundance."

In this county, the cultivation of fruit is of early date. The oldest Pear tree in the State still stands a constant bearer, having been imported from England by the celebrated Governor ENDICOTT. Importations were then very rare, most trees being propagated by the seed. This tree is now more than two hundred years old. It is a *Bon Chretien*, though of inferior quality. The exact date at which it was set out is not known. The grant of the land on which it stands, was made to Governor ENDICOTT in 1632; and, not many years after that, he had a nursery of young trees not far from the spot where this tree now stands. Some of these trees he is known to have sold to his neighbors, who generally paid in land, the price being sometimes, two acres a tree.

The *St. Michael's*, *St. Germain*, *Brown Beurre*, and some other fine foreign Pears were known and esteemed in this county many years ago. These varieties were probably far better when first introduced into this county, than they are at present. In new lands and mild climates, they are ordinarily better than in other soils and colder climates, where they are apt to be inferior.

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## PRACTICAL DIAGRAMS OF THE RULES FOR LAYING OUT GARDENS, FORMING CURVED LINES, &c.\*

To form a volute where the border is of equal breadth.—The usual mode of forming a volute or spiral line is one of the simplest problems in geometry, and therefore requires no explanation here. The following method is, however, both original and better adapted for throwing up such a figure in groundwork. It is the invention of Mr. ALEXANDER FORSYTH, and was by him first described in *The Gardener's Magazine*, from which source our four following figures and descriptions are taken. "Make a circle around the center of your intended volute, as much in circumference as you intend the

\* From McIntosh's *Book of the Garden*.

breadth of your circuitous border to be; stick this circumferential line full of pegs, and tie one end of a garden line to one of them. Taking the other in your hand, go out to the point where you intend the volute to begin; and as you circumambulate, holding the line strained tight, you will delineate on the ground the annexed fig. 1.



Fig. 1.



Fig. 2.



Fig. 3.

A volute where the border is intended to be gradually narrowed towards the center as in fig. 2, may be thus formed:—"Make a circle as before, and instead of driving the pegs upright, let them form a cone; or, instead of pegs, use a large flowerpot whelmed, and, if necessary, a smaller one whelmed over it. Measure the radius of your volute, and wind that complement of line round the cone in such a manner as to correspond with the varying breadth of your intended border, and commence making the figure at the interior by unwinding the line."

A volute, the border of which widens as it approaches the center, is produced upon the same principle as the last; only, as the figure is as it were reversed, unwind the line from the other end, and fig. 3 will be produced.

The following ingenious method of forming circles or other curvilinear lines, is the invention of Mr. FORSYTH, and must be of great practical use to those who have the laying-out of grounds, particularly intricate figures in geometrical gardens. Suppose  $a$   $b$   $c$ , fig. 4, to be three points in the curve,



Fig. 4.

taken at equal distances (say fifty links): placing the cross-staff at  $b$ , with

one of the sights pointing to  $a$ , make  $bo$  perpendicular to  $ab$ , and measure its length. Then, removing the cross-staff to  $c$ , make  $co$  perpendicular to  $bc$ , and equal to  $bo$ ; and make the line  $bod$  equal to  $aoc$ . Then  $d$  is a point in the curve; and in the same manner other points may be found successively.



Fig. 5.

Fig. 5 differs from the above only in this, that the angles are taken outside. Set up three pegs, say fifty links apart, as before, and fix the cross-staff in  $r$ , with one sight on the line  $rba$ , and the other pointing to  $c$ . Then measure  $rb$  and  $rc$ , and remove to the line  $ecb$ ; draw  $ec$  equal to  $rb$ , and  $ed$  equal to  $rc$ , and so on. The same end may be obtained by a theodolite, or by any

other instrument for taking angles; or even with three needles stuck in a board, form-





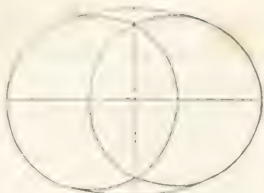


Fig. 8.

the ends of the oval; the intersecting points of these circles will be centers to the two segments required to complete the figure 8.

To describe an oval, when the length and breadth are both given, lay down the length and breadth perpendicular to each other; combine  $a$  and  $d$ ; measure the distance from  $c$   $d$ , on the line  $a$   $c$  from  $c$ , which will give  $c$   $n$ ; measure the distance from  $n$   $a$ , on the line  $d$   $a$ , which will give  $f$ ; divide  $f$   $a$  into two equal parts, at the middle of which erect a perpendicular: where that perpendicular cuts the line  $a$   $b$  will be the center  $h$ , for the end of the oval; and where it cuts the line  $d$   $i$  at  $g$ , is the center for the side, (fig. 9.)

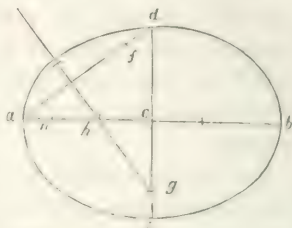


Fig. 9.

The gardener's oval, when both the length and breadth are given, is thus formed:

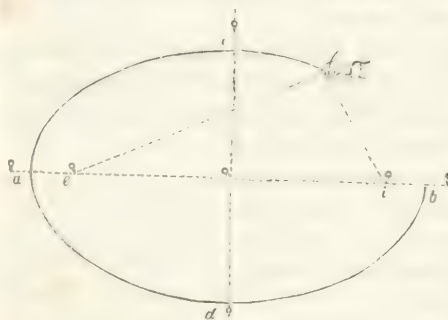


Fig. 10.

Set off the length  $a$   $b$ , and breadth  $c$   $d$ , perpendicular to each other; take half the long diameter, and measure from  $c$ , to the line  $a$   $b$ , with that length; when that line cuts the line  $a$   $b$ , put in a peg; do the same on the other side, and the point  $e$  will be found; stick in there also a peg; then, with a cord passing round the pegs  $i$   $e$  and  $c$ , with the addition of the space from  $a$  to  $e$ , describe the figure with the peg  $c$ . (Figure 10.)

the line  $a$   $b$  being given, divide it into two equal parts; from these lines intersect each other, construct a circle with the radius  $c$   $a$  or  $c$   $b$ ; draw the line  $c$   $d$  perpendicular to  $a$   $b$ ; taking  $a$  and  $b$  as centers, describe two arcs; draw a line from  $b$  through  $d$ , till it cuts the arc at  $f$ ; then, with  $d$   $f$  as a radius, complete the figure.

To form an egg-shaped figure (fig. 11), equal parts; from the point  $c$ , where

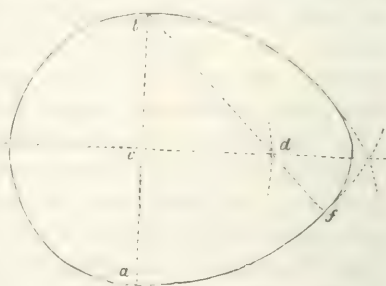


Fig. 11.

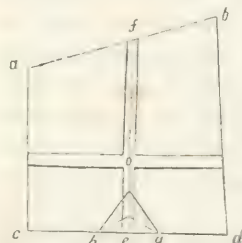


Fig. 12.

To set off a walk perpendicular to the line  $c$   $d$ .—From the center  $e$  on the line  $c$   $d$  set off  $e$   $g$  and  $e$   $h$ , at equal distances. From the points  $h$   $g$  draw two arcs of different radii; if, where these arcs bisect each other, a line be drawn, it will be perpendicular to  $c$   $d$ . By the same rule the center of a walk will be found perpendicular to the

line  $ef$ , taking  $o$  as the center, fig. 12. To set off a walk perpendicular to the corner of a wall.—Carry out the lines  $a$  and  $b$  straight with the face of the wall, and of equal lengths; from the two ends of these lines, with equal radii, describe two arcs; from where they bisect each other, draw a line to the corner of the wall, which line will be the center of the walk, fig. 13.

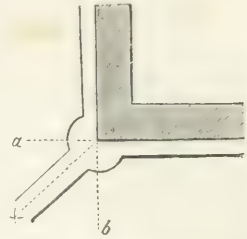


Fig. 13.

The annexed diagram, fig. 14, illustrates an instrument very useful in laying out mathematical figures. It consists of an upright pole two feet in length, shod with iron, upon which revolves a metallic tube with a projecting shoulder, to which is attached by a screw a wooden rod, eight, ten, or more feet in length, marked in feet and inches. Upon this rod there is a movable iron slide, with an iron sharp-pointed stud. The two-foot pole being placed in the center, or point from which the figure is to be described, the slide is moved along the rod to the proper distance, and fixed there by means of a screw. An iron handle, turned up at the end of the rod, about 18 inches in length, is taken hold of, and, as it is moved round, the iron stud in the horizontal rod describes the figure intended to be formed.

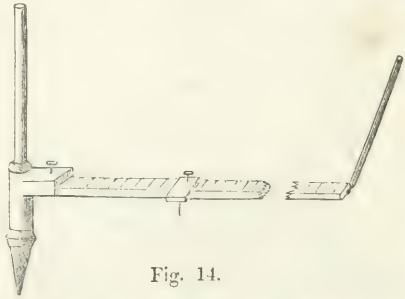


Fig. 14.

Another useful instrument is a pair of wooden compasses shod with iron, the legs of which are five feet in length. To one leg a quadrant bar of iron is attached, and made to pass through the other leg. This quadrant-shaped iron rod is perforated at every three inches, and furnished with a screw-pin to keep the legs of the instrument distended to the extent required. The quadrant rod is placed exactly in the middle of the leg of the instrument, so that when the leg is moved, for example, three inches on the quadrant, it gives six inches at the points of the compasses; if moved one foot on the quadrant, it gives two feet, and so on, being always double the former extent.

The following figs., 15 to 29, which sometimes occur in flower-gardens, are given, with their centers marked to facilitate their being laid down on the ground. They are from a German work entitled *Handbibliothek für Gärtner*, by LIGIER of Berlin.

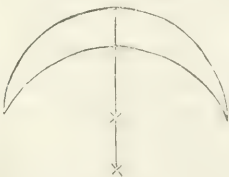


Fig. 15.



Fig. 16.

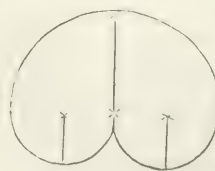


Fig. 17.

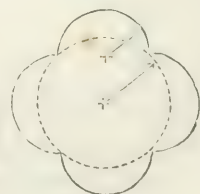


Fig. 18.



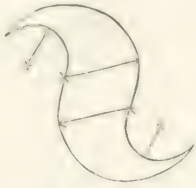


Fig. 19.

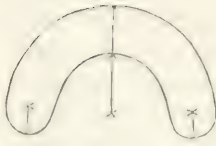


Fig. 20.

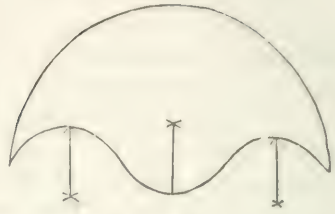


Fig. 21.

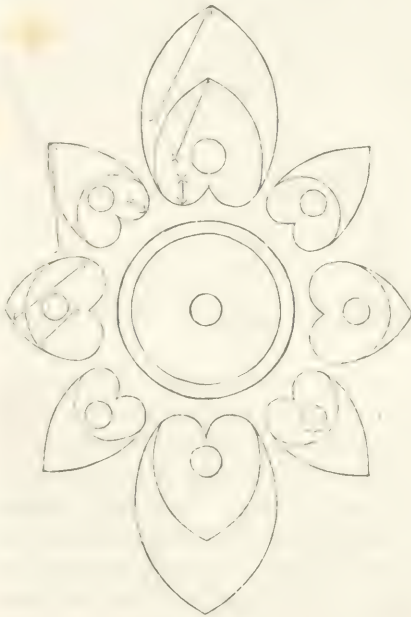


Fig. 22.

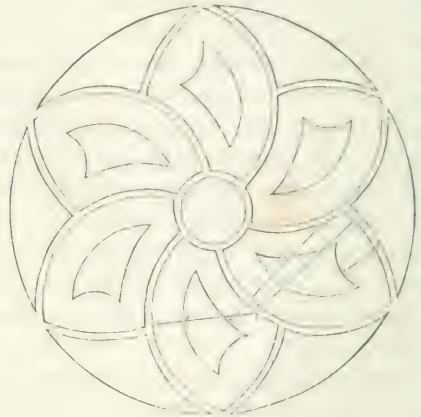


Fig. 24.



Fig. 23.



Fig. 25.

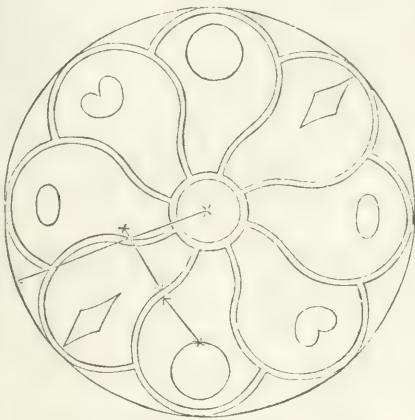


Fig. 26.

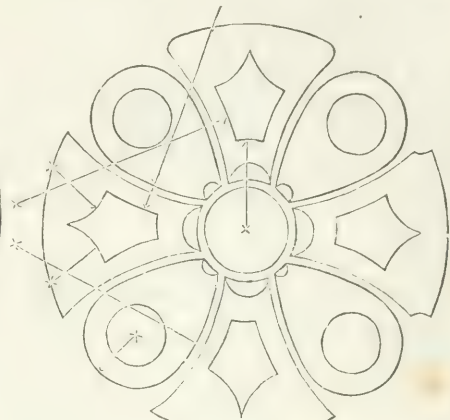


Fig. 27.

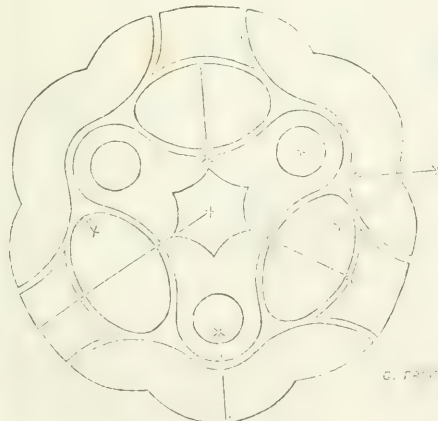


Fig. 28.

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ROCHESTER, N.Y.

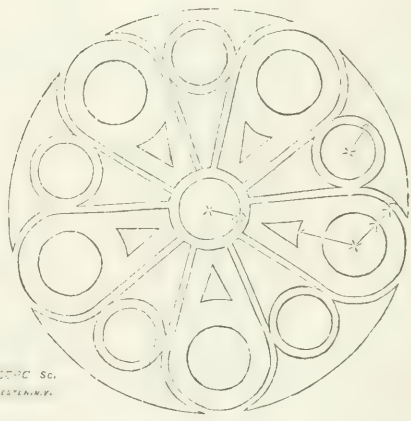


Fig. 29.

*Rules for calculating the length of shadows.*—In selecting situations for gardens and also for planting trees for shelter, the length to which their shadows will reach during winter deserves consideration, as also does that of the shade caused by halls and other buildings; for no screen should be planted so close as to shade any part of the ground, nor any glass roof be erected on which the sun may not shine every day in the year.

Several rules are given for determining this. The relation between the height of a tree and the length of its shadow depends on the latitude of the place and the sun's declination, which latter will be found by consulting an almanack, and the former by the sun-dial—at least, most sun-dials have the latitude engraved on them; if not, the map of the county will give it. The height of the tree, wall, or building, and the length of its shadow on the ground, form the perpendicular and base of a right-angled

triangle, the hypotenuse of which angle is represented by that of the sun's rays from the top of the tree to the ground. This hypotenuse, or direction of the sun's rays at noon, always forms, with the ground line, an angle equal to the amount of the latitude and the sun's declination added together, from the 20th of March till the 22d of September; but from the 22d of September till the 20th of March, the sun's declination is to be subtracted from the amount of the latitude. This angle being found and the height of the wall, house, or tree taken, all the rest will be found by the rules of trigonometry.

The following simple rule may be of use to such as do not understand geometry or trigonometry, and will give the shadow near enough for practical purposes:—

Multiply the height of the wall, tree, or building—

In latitude	51 $\frac{1}{2}$ °	by 3.719.
....	52°	.. 3.852.
....	53°	.. 4.149.
....	54°	.. 4.492.
....	55°	.. 4.895.
....	56°	.. 5.369.
....	57°	.. 5.944.
....	58°	.. 6.651.

The product will give the length of the shadow at noon on the shortest day.

*Example.*—What will be the length of the shadow of a tree 10 feet high, in latitude 52° on the shortest day?

3.852 the multiplier for latitude 52°.  
10 the height of the tree.

---

38.520

12

---

6.240

12

---

2.880 *Ans.* 38 feet, 6 inches, 2 parts.

## ORNAMENTAL GROUNDS AT HAMILTON COLLEGE.

BY THE CURATORS.

THE readers of the *Horticulturist* will remember that mention was made in this journal, a few months ago, of certain contemplated improvements in the grounds pertaining to Hamilton College, at Clinton, N. Y. Some progress has been made in this work, though it is far from being completed. Our time and labor, hitherto, have been expended chiefly in removing unsightly incumbrances, in grading and draining the soil, in planting hedges, and laying out roads and walks. This foundation-work being now finished, and something having been done in the way of planting trees and shrubs, we feel justified in making a brief report of our operations to those interested in such matters, and in presenting an engraved plan of our grounds. We do this by way of acknowledgement to those who have aided us in this enterprise, and in the hope of encouraging others who are engaged in similar labors.

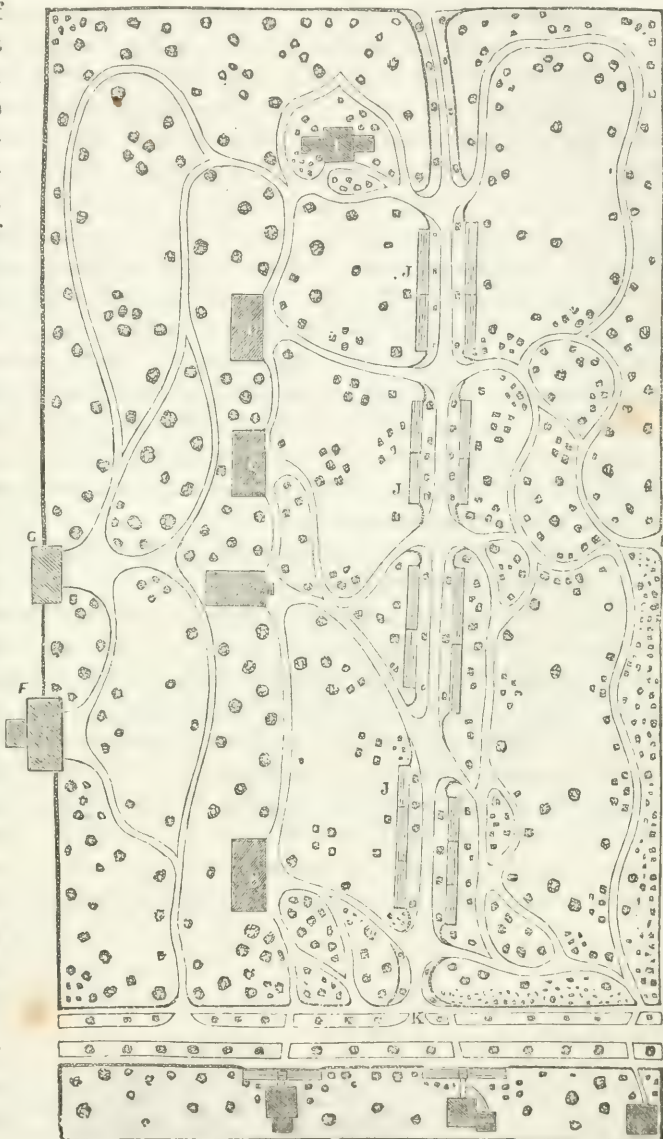
Let us now turn to the annexed plan. We will suppose the reader to be, for the time, our visitor. On arriving at the middle entrance, K, on the south side of the Park, let us drive along the carriage-road a few rods distant from the front of the College buildings. This avenue, you will observe, is bordered on each side with a wire fence, and a hedge of Buckthorn. On the left, we have a near view of the South College, B; the Chapel, A; Middle College, C; North College, D; and the Astronomical



Observatory, E. If we stop at this last named edifice, and ascend the tower, we shall behold a landscape of great variety and beauty. Not far from the base of this building, the hill slopes gently down to the valley of the Oriskany. Yonder, several miles to the north, this valley unites with the Mohawk, from which you see the mist rising. Looking still further, in the same direction, among the blue hills near Rome, you discover a storm raging; while at the east, the Trenton hills, some twenty miles off, are bathed in sunshine. At the south and west, you see other hills and plains, not wanting in interest and beauty. Before leaving this fine post of observation, whether of the heavens above or the earth beneath, let us appoint another visit here, a year

hence, when, the new telescope (the first large instrument of the kind ever made in this country,) being mounted, and a transit instrument and clock obtained, we shall be able to entertain you longer and better at this point in our grounds.

Passing now in a south-westerly course, in the rear of the Colleges, we come to the Gymnasium, G; and to the Mineralogical Cabinet, F; in each of which places we shall



PLAN OF GROUNDS AT HAMILTON COLLEGE.

doubtless find much to interest us. Returning by another road to the Observatory, we catch a glimpse of the mansion in which the late President DAVIS spent the evening of his life. At the north-eastern extremity of the Park we approach the brow of the hill on which the Colleges stand. The Oriskany creek sweeps around near the foot of this hill, now hidden among groups of trees, now sparkling in the sun, and filling the air with a pleasant murmur. Turning our steps southward, we will pause a short time at the College Cemetery, which we enter at I. This could not well be introduced into our published plan, and we will, therefore, only say of it here that both this and the avenue leading to it are planted with evergreens and various drooping trees appropriate to such places. Several monuments have already been erected over honored and precious dust, and we are confident that taste and affection will continue to render this spot increasingly beautiful. As we proceed again, in a south-westerly direction, we obtain, at one point, a broad view of Clinton, in the valley beneath us; at another, we see the spires and roofs of the village of Paris, on the summit of an opposite hill; and at another, we discern the city of Utica, nine miles distant. At several of these points commanding the finest prospects, rustic arbors, and seats, will soon be constructed.

Having now arrived at the main entrance, it will, perhaps, be our good fortune to meet some of the Professors, (a few of whose residences appear on the south side of our Plan,) and to receive under their roofs that hospitality which they know well how to dispense. Before parting, however, we beg to assure you that the work we have thus begun shall be completed. These grounds are not, indeed, of vast extent; we have no wealth to lavish in marble fountains and statues, and other costly works of art; but we will try and not mar what Nature has rendered so beautiful to our hands. By planting trees, shrubs, and flowering plants of every variety of form and foliage, and each, if possible, perfect in its kind; by propriety of arrangement; by such pleasing structures as our means will enable us to adorn the grounds with; and by rendering all these accessible by roads and walks; we will try to make this plateau a haunt of beauty, and in harmony with the enchanting scenery which surrounds it.



## Foreign Notices.

It is to be feared that all round London the hopes of the gardener have been destroyed by a sudden and severe frost on the night of the 24th inst. From the 18th to the 20th the weather was excessively hot for the period of the season, the thermometer indicating  $77^{\circ}$  in the shade on the 19th; and as high as  $95^{\circ}$  in the sun on the 21st. A strong gale commenced from north-east on the night of the 22d, and continued on the 23d, on the night of which there was  $1^{\circ}$  of frost; but the blossoms were safe. On the evening of the 24th there was  $1^{\circ}$  of frost at 10 P. M.; but during the night the thermometer fell to  $18^{\circ}$ —or  $14^{\circ}$  below freezing, notwithstanding the heat arising from the ground. Where this heat was prevented from affecting the thermometer by a radiator, the temperature of the air was as low as  $12^{\circ}$ .

The frost was what is termed a black frost, of the most pervading description. Apple, Pear, Plum, and Cherry blossoms are everywhere killed. There may be a few from later blossoms, and a few naturally late-blooming Apples, but all the most valuable are completely destroyed. Peaches and Nectarines on a good south wall have suffered, but such of the young fruit as were leaning against the warm wall are supposed to be safe. The shoots of Walnuts are hanging wet, black, and soft, as if par-boiled.

There is no record of the thermometer having been thus low in April, near London, in the present century at least.

Accounts from the surrounding counties are to the same effect. Near Tunbridge Wells, the thermometer fell to  $25^{\circ}$ , and the most abundant young crop of Apricots, Peaches, and Pears, which had been seen for several years, was entirely destroyed. In Hampshire, near the Andover Road-Station, between 4 and 5 o'clock, the thermometer was  $14^{\circ}$  below the freezing point. The whole of the blooms on the Cherries, Pears, Plums, and Apples, totally perished; also the young Apricots, which were larger than Damsons, and all the Greengage Plums, as well as Rhubarb, and every Asparagus head which was above ground. Such destruction has never before been seen by our correspondent.

At Sawbridgeworth, although Mr. RIVERS observed the thermometer no lower than  $25^{\circ}$ , all the wall fruit which was not well covered, all the standard Pear, Plum, and Cherry blossoms, and the greater part of the Apples, if not all, utterly perished.

Near Worthing the common Box lost nearly all its *old* leaves; our informant assures us that he found the inside of them a solid plate of ice.

Next week we shall no doubt have abundant confirmation of this sad announcement.—*Gardeners' Chronicle*, of April 29.

SALE OF PLANTS AT EALING PARK.—The sale of Mrs. LAWRENCE'S magnificent collection of stove and greenhouse plants commenced on Thursday last, and will be finished to-night. The first day was wet and cold; nevertheless upwards of 50 people attended, consisting of the principal metropolitan nurserymen, several noblemen and gentlemen's gardeners, and one or two gentlemen. Among the latter we noticed, W. UPTON, Esq., of Forest Hill, and H. COLYER, Esq., of Dartford. The plants were, for the most part, in good condition, and realized, upon the whole, fair prices. When we were present on Thursday some of the largest of the specimens were brought forward. We observed that the enormous *Epacris grandiflora*, which for many years formed the crown head of the Ealing Park collection at the Chiswick fetes, was bought by Mr. EYLES, for the Crystal Palace Company, for 12*l.* 10*s.*; this fine plant was quite six feet high, and as much through, and covered with bloom. A *Polygala acuminata*, of similar size, and also in flower, was put up,



and fetched 16*l.* 15*s.*; this was purchased by Mr. URRON, who also became the fortunate possessor of a magnificent *Azalea exquisita*, for which he paid the handsome sum of 17*l.* 17*s.*; this plant was in all respects in excellent condition, and measured about five feet in height and six feet in width. The same buyer likewise purchased a beautiful *Azalea variegata*, four feet by five feet, for which 15*l.* 15*s.* was paid. An extremely good plant of *Azalea Gladstonesi* fetched 16*l.* 10*s.*; this was purchased by — JOHNSTONE, Esq., of Oak House, Feltham. *Azalea Laurenciana*, (which did not appear to be different from *Minorca*) fetched the great price of 21*l.* 3*s.*; this was bought by Mr. URRON; it was certainly a splendidly grown plant, measuring four feet in height and six feet in width. *Azalea Apollo*, five feet by four feet, fetched 8*l.* 10*s.*; and *A. Gladstonesi*, 7*l.* 5*s.* *Azaleas*, altogether, fetched good prices, as did greenhouse plants generally; although some *Heaths*, *Eriostemons*, *Podolobiums*, *Indigofera decora*, and a few other things, sold for prices considerably below their value. Stove plants seemed less in demand than greenhouse plants, and therefore realized less money. Beautiful bushes of *Leora Javanica*, 4½ feet in height, and 3½ feet in width, only fetched 2*l.* 10*s.*; *Dipladenia crassimula*, four feet high, and three feet through, 10*s.*; *Allamanda cathartica*, five feet high, and four feet wide, 2*l.* 15*s.*; and other plants of this description, fetched similar prices. The number of lots sold to-day was 161; the principal purchasers, in addition to those already named, were Mr. COLYER, Mr. AMERSON, BASSETT, of Stamford Hill; the Earl of Stamford and Warrington; Mr. DODS, gr. to Sir JOHN CATHART, Bt.; Mr. WALKER, of Acton; Mr. JAMES VEITCH, of Chelsea; and Messrs. FRASER, of Leambridge. Yesterday about the same number of buyers assembled, and a similar number of lots were sold, but they did not fetch near such high prices as they did on Thursday. The plants were, however, generally smaller. A *Pimelia spectabilis*, 5 feet in height and 6 feet in width, was bought by Mr. COLYER for 6*l.* 15*s.*; a *Dillepisia*, 2½ feet high, and as much through, was knocked down to Messrs. FRASER for 5*l.* 5*s.*; *Boronia serrulata*, 2 feet in height, and a little more in width, was purchased by Mr. VEITCH for 5*l.* 15*s.*; MRS. TREADWELL had a *Chorozeina Henchmanni*, 3½ feet in height, and 4 feet in width, for 3*l.* 15*s.*; *Erica multiflora bicolor*, one of the handsomest of the genus, measuring 3½ feet in height, and as much through, was purchased by Mr. TURNER, of Slough, for 2*l.* 10*s.*; *Franciscea latifolia*, two feet high, and as much through, was bought by Dr. DAUBENY, of Oxford, for 17*s.*; the same gentleman also purchased an *Adamia versicolor*, of similar dimensions, for 1*l.* 2*s.*; *Boronia pinnata*, three feet in height, and more in width, was knocked down to Mr. SPEED, of Edmonton, for 2*l.* 12*s.* 6*d.* *Colomenia rubrum*, a beautiful plant, six feet high and as much in diameter, was bought by Mr. EYLES, for the Crystal Palace Company, for 3*l.*; other lots fetched from 10*s.* to 4*l.* each.—*Gardeners' Chronicle*.

CLERODENDRON SPLENDENS.—There is hardly a more beautiful or useful plant in cultivation than this *Clerodendron*; for, under good management, its large clusters of brilliant scarlet blossoms are produced in great profusion, and they last a long time in perfection. Unfortunately it can never be everybody's plant, for it cannot be grown with advantage except where it can be furnished with plenty of heat and moisture during its growing season. Where there is convenience, however, it is well worth attention, and will be found to amply repay any amount of trouble which may be bestowed on it.

It may be readily propagated by cuttings made of short-jointed young shoots, selected in a rather firm state, inserted in sandy, peaty soil, covered with a bell glass, and afforded a brisk bottom heat. It may also be increased by grafting it on any of the stronger growing varieties; but, although this plan was at one time much recommended, it has now, I believe, fallen into disrepute, the plant having been found to do quite as well on its own roots. The young plants should be potted singly in small pots, as soon as they are sufficiently rooted to bear handling, and replaced in bottom heat, in a moist, warm situation. When well established, shift into other pots, two sizes larger, and keep them as near the glass as is convenient, in order to induce the production of strong, short-jointed wood. And during the growing season, continue to afford them a brisk bottom heat of 85° or 90°, with a warm, moist atmosphere, and all the light possible, merely guarding them from the direct rays of the sun on the forenoons of bright, warm days. Do not keep them growing too late in autumn, however; rather endeavor to have the cuttings rooted

early in the season, so as to get strong, well-furnished plants by autumn, when they should be removed to a drier atmosphere, gradually withholding water from the soil, with a view to get the wood well ripened. And I may observe that upon this, and the plant being allowed a period of rest, future success greatly depends; for unless the wood is properly ripened, and the natural season of rest afforded, there will be no possibility of getting them to break strongly or grow vigorously; but if these particulars have been properly attended to, they will grow equally well whether started in June or March, and form splendid plants for blooming in a warm house during winter. If, however, your young plants are intended for blooming in summer, water should be gradually withheld towards the middle of October, and they may be removed to their winter quarters by the middle of November, which may be a corner of the stove, or to any dry situation where the temperature may average from 50° to 55°, and no water should be given to the soil during the resting season. About March turn them out of their pots and shake away as much or the soil as can be done without injuring the stronger roots, and re-pot in not over-large pots, using good fresh turfy loam, rich fibry peat, and leaf soil in about equal proportions, well intermixed with plenty of sharp sand to secure rapid drainage, cutting the shoots well back to strong prominent eyes. After potting, plunge in a sharp bottom heat, and maintain a moist atmosphere by frequent syringing, but carefully avoid overwatering the soil, until the plants fairly start into growth.

The shoots may be loosely trained to stakes until the plants can be shifted into their flowering pots, when light wire trellises may be applied, so as to enable them to be kept neatly and regularly tied. There is no danger of overpotting a plant like this, for with good management, plenty of light, and the command of heat and moisture, it will fill a 20-inch pot, and form an immense specimen in the course of a few months, or it will bloom nicely in a 12-inch pot, forming a handsome moderate sized plant. Therefore, the size of the flowering pots may be regulated by circumstances, the only difference being that the plants will bloom earlier and their beauty will be shorter lived in small pots, and *vice versa*. If a large shift is given, however, be very careful not to give too much water to the soil, until the roots reach the sides of the pot, and when this is the case a liberal supply of clear manure water should be administered. Keep the shoots regularly trained to the trellis, and continue to keep up a brisk bottom heat, with a warm, humid atmosphere, until they are fairly in bloom, when they may be gradually prepared for removal to the show-house; and if this is done carefully, and they are afforded a close corner not exposed to draughts, they will continue to unfold their brilliant flowers for a very long period. By taking care to get the wood well ripened, affording the plants a period of rest, and disrooting, &c., as recommended above, the specimens will last for any number of years.—*Alpha, in Gard. Chron.*

**CONOCLINUM IANTHEMUM.**—The fine foliage, excellent habit, and large loose spreading heads of light blue flowers, which terminate every shoot of this plant, make it exceedingly attractive; and its season of blooming, winter and early spring, when blue flowers are scarce, merits for it a place in every collection of plants.

This is an excellent time for commencing its culture, as a good specimen of it may be grown in the course of the summer. When received it should be placed in a close pit or house, keeping it near the glass, and as soon as it has got over the effects of traveling, shift it into a pot two sizes larger than that in which it has been growing. For soil use good rich turfy loam, fibry peat, and well decayed leaf soil in about equal proportions, adding a sufficient quantity of clean sharp sand to ensure perfect drainage, and a small quantity of thoroughly decayed cow manure may also be added with advantage. Be careful to have the ball and soil in a nice moist healthy state when the plant is shifted, and place it in a close moist warm situation, to avoid the necessity of giving much water at the root until free growth shall have commenced. Sprinkle the plant morning and evening with the syringe, and maintain a humid atmosphere; also keep it as near the glass as is convenient, in order to induce a vigorous start. When it is evident that the roots have taken hold of the fresh soil, stop the shoots, and tie them out, so as to induce the lower buds to push, in order to obtain a well-furnished foundation. Continue to afford the plant a humid atmosphere, sprinkling it frequently overhead with a fine-rosed syringe, but regulate



the temperature so as to secure strong close jointed shoots. If all goes on well, a second shift will be required towards the middle or end of May, and this should not be deferred until the roots get matted, or the plant sustains any check for want of pot room. There will be no danger in giving a large shift now, but beginners will be safer to give only a moderate one, for there is some danger of erring in watering a plant, when it is surrounded by a large body of loose soil, and therefore it is better to give two moderate shifts. Attend to keeping the shoots nicely tied out, in order to admit light and air to the foliage, and to secure a compact sturdy habit of growth.

During summer, the plant, if in vigorous health, may be removed to a cold pit or frame, which can be kept close and moist. But the very best position for securing rapid, strong growth, would be a pit where a bottom-heat of 80° or 85° could be maintained, and where the plant could be kept near the glass, keeping the atmosphere rather cool, and affording it a slight shade for a few hours on the forenoons of very bright days. Here it would grow very rapidly, and a frame and a little fermenting material properly put together might be easily made to afford a gentle bottom-heat for two or three months, and would be useful for many plants besides this. Attend during the growing season to keeping the shoots nicely tied out, stopping them as may be necessary, and also to shifting as may be required. Stopping, however, should not be practiced later in the season than will allow of getting the last growth well ripened before winter; and if the shoots are kept properly tied out, and the plant well managed otherwise, very little stopping will be necessary to secure compact bushy specimens. When damp cloudy weather occurs in autumn, the plant should be removed to a rather dry atmosphere, where the temperature may average about 55°, placing it near the glass, and it should be rather sparingly supplied with water for a few weeks, in order to get the wood well ripened, which will greatly conduce to a fine display of bloom. By removing the plant to a warmer situation, and giving a liberal supply of water at the root, it will soon develop its beauty, and may be placed in the conservatory while in flower. Care must be observed, however, not to place it in the way of cold draughts, and a damp stagnant atmosphere must be guarded against, as this would soon destroy the blossom, and greatly impair the beauty of the plant.

If afforded a close dry situation, the flowers will remain some two months in perfection, and will present a striking and agreeable contrast with those of most winter-blooming plants. After the flowering, the plant may be cut back rather closely, and removed to a cool dry situation for a few weeks, keeping it sparingly supplied with water until it shows indications of growth; when it should be repotted, slightly reducing the old ball, and clearing away a portion of the old exhausted soil. The same treatment as recommended above may be repeated, and will produce an immense specimen in course of the second season. Cuttings selected of firm bits of the young wood, and treated in the ordinary way, will root very freely in bottom heat. But the plant will bear cutting back and disrooting to any extent; so that when once a stock is obtained, there will be little necessity for propagating it.—*Alpha, in Gard. Chronicle.*

**THE CHRYSANTHEMUM.**—In the following remarks respecting Chrysanthemums I shall chiefly confine myself to the mode of cultivating them in pots. As soon as the plants have done flowering, I cut them down, and place them in any convenient corner on the south side of a wall, where they are in some measure sheltered from frost and north-easterly winds. They remain in this situation undisturbed, except by watering them now and then, until the present time, when they are removed to a more open place, preparatory to their being wanted for the purpose of propagation. Chrysanthemums may be increased by cuttings, layers, and offsets; I have often grown them from the latter: but I have found the foliage so apt to go off them, and leave the plants naked at the bottom, that I greatly prefer cuttings, which, with good treatment, will retain their foliage green and healthy almost to the rims of the pots. The best time for putting in cuttings is the latter end of April, or the beginning of May. I use the points of the best shoots of the current year's wood, not more than 2 or 3 inches in length, cutting them close to a joint, and removing the bottom leaves. When potted, I transfer them to a close frame; and if it is convenient, I assist their striking by means of a gentle bottom-heat, but this is not absolutely



necessary, for they strike readily without it. I shade for a few hours in the day-time, until they have taken root, when I give them plenty of air, and pinch out their tops, which causes them to break freely. When the shoots have grown an inch or two in length, I pot into 3-inch pots, in a mixture of turfy loam and one-third rotten dung, selecting the strongest and bushiest plants, and discarding the rest. When potted, I again place them in a close frame, and shade a little until they have made fresh roots. They are afterwards set out of doors, sufficiently far apart to prevent their being drawn, and kept well supplied with water. When the shoots have grown 3 or 4 inches in length, I again pinch out their tops, in order to make them bushy; and after they have grown an inch in length, I shift the plants into 6 inch pots, placing them again in their former situation; and when they have filled the pots well with roots, I re-pot them into 9-inch pots, in which I flower them, using the same compost as before. I now place them thinly in a nice open place, where they have a free circulation of air; this keeps them dwarf and healthy. I keep the pots clear of weeds and suckers; water them as often as they require it; and when they have fairly set their flower-buds, I give them some good clear manure water twice a week, or more or less according to the state of the weather. About the beginning of October, I remove some of the most forward plants under glass, giving them plenty of air through the day. The others are taken in as they are required, or as the weather may render necessary; for though hardy, the Chrysanthemum will not stand more than  $4^{\circ}$  or  $5^{\circ}$  of frost, without sustaining some injury. I bloom here every year about 150 plants, varying from one to two feet high, and having from 25 to 30 full blown flowers on each plant, many of which do not require a single stake to support them. It may be worth while to remark that, if some of the most promising shoots of out door plants are layered in the beginning of September, by giving them a twist, and pegging them down a few inches below the surface of the ground, so as to make young plants about ten inches high, they will be well rooted in three weeks, *i. e.* if they are kept watered. When rooted they may be taken up and potted in 6-inch pots, and placed in a close frame for a few days, while they make fresh roots; afterwards they should have plenty of air. Plants managed in this way are very suitable for the front shelves of the stage, or for mixing with other plants. The earliest and best flowering of the plants I take cuttings from are selected and planted in any vacant places in the shrubberies, all the shoots being first shortened back to within six inches of the pot. This causes them to make more shoots, which are again stopped, thus keeping the plants dwarf and in due bounds, and inducing them to bloom at a season when few flowers adorn the garden.

—*T. R., in Garden's Chronicle.*

WARDIAN CASES.—*Royal Institution, March 17.*—DR. STEPHEN H. WARD delivered a lecture on this occasion, on "Wardian Cases," of which the following is an abridged report. DR. WARD began by explaining the circumstances which had led his father to adopt air-tight cases for the accommodation of his London window plants. He had placed a chrysalis in a bottle, with a little damp earth, in order to watch its progress towards transformation into a moth; a Fern and a Grass began to vegetate, and, to his surprise, continued to show a healthy appearance, the former on its more perfect development proving one of his favorites, which he had often failed in rearing under ordinary circumstances. On investigating and questioning himself on these appearances, the answers readily presented themselves, inasmuch as all the requirements of nature were contained within the bottle—air, light, and moisture. Many persons had fallen into the error that WARD's cases were, or ought to be, hermetically sealed; on the contrary, a change of air is frequently necessary; this will imperceptibly occur in the closest made cases, or they would inevitably burst. The trough to contain the earth may be made of any materials—earthenware or wood pitched inside; but the best are zinc. Of all, by far the best were stated to be bell-glasses, which are also admirably adapted for cut flowers, which are long preserved in them, as in the case of a Camellia, which, on one occasion, had retained its beauty for nearly a month. To size there are no limits—from an ounce phial even to the Crystal Palace itself. The decay of a healthy plant on transmission to a room in town is effected by the variety of noxious gases, evaporation from dryness of air, frequent and sudden alteration of current and temperature, deposition of dust, soot, &c., the latter especially inimical; all these were pro-

vital against by the glass case, while the moisture which was raised became condensed on the sides of the glass on occasions of change in the external temperature, accumulating and descending to the earth, at the bottom becoming more perfectly aerated, and in a state better adapted for stimulating and nourishing the plant. So complete is the *roulée* in such a little world, in itself independent of external circumstances, that the old bottle sealed up 19 years since is green with vegetation, though the deposits of Confervæ on the inner surface materially disfigure its appearance. This bottle has had no fresh moisture since first closed. The advantages, besides those of mere ornament, were stated to be great—to the poor man in hospitals, treatment of the insane, transportations of plants from one country to another, duration of flowering, to all ranks confined in cities and sick rooms, they were stated to be a blessing. At St. Thomas' Hospital a subscription has been set on foot to provide cases, one of which was exhibited, most elegant in form, and in these the patients found a fruitful source of gratification. One of the advantages belonging to cases of this kind was the facility of transmitting plants from one country to another. Mr. FORTUNE has sent to this country 250 specimens, out of which 215 have arrived in health. Mr. WARD successfully forwarded to Sydney a variety of English plants in a case that was five months on the passage; on its arrival there the Primrose was just blossoming; and this case subsequently returned to England with a collection of Australian plants. The carbonization of the atmosphere by animal respiration, and the restoration of oxygen by vegetation, is a well known fact, and upon this Mr. WARD claims the merit of suggestions as to sanitary buildings in which vegetation would form a conspicuous feature. In connexion with the restorative nature of the process of vegetation, a taper was put under a bell-glass containing a Rose and other flowers, and was extinguished in ten minutes. But after exposing the glass to the sun for about three hours, the taper could be again kept alight for the same period as before. In the same manner vegetation in water would be found to restore the oxygen, and in consequence it was possible to keep fish in air-tight cases, when vegetation was allowed to accompany them. To Mr. WARD was due the credit of having first introduced a vivarium into a closely glazed case in 1841, and for having depended for the renovation of the air necessary for the gold and silver fish contained therein upon the purifying action of associated plants, such as *Pontederia crassipes*, *Pistia stratiotes*, *Valisneria spiralis*. Mr. BOWERBANK took the hint from Mr. WARD, and established a little vivarium in a large glass jar—stickle-backs, minnows, and fresh water snails, and with plants of Valisneria, and covered the mouth of the jar with glass, so as to make it a closed case. Snails, for the purpose of removing the Confervæ that cover the leaves of Valisneria and other aquatics, were first recommended in a note in the number of the "*Microscopical Journal*," for September, 1841. It was, however, stated that so long ago as 1762, LEDERMÜLLER had published, in his "*Microscopical Recreations*," a figure of an open-mouthed bottle containing fresh-water zoophytes, associated with Duckweed, Chara, and other plants. Mrs. THYNNE first introduced marine vivaria into London; having brought some living Madreporæ up to town in 1846, from Torquay, she placed them in two glass tanks, and at first effected aëration of the water by having it daily taken out and poured in gradually from a height, occasionally sending for fresh sea-water and thoroughly renewing it; after a year or two her Madreporæ seemed to flag, and then she procured some pieces of rock and shell with living sea-weeds attached, and subsequently depended upon the counterbalancing action of these. Dr. WARD decidedly entertains sanguine hopes that success will ultimately attend the adaptation of the principles in extension to the maintenance or restoration of health to the human frame, although he admits that difficulties would present themselves in the attempt to realize such adaptation.—*Gardeners' Chronicle*.

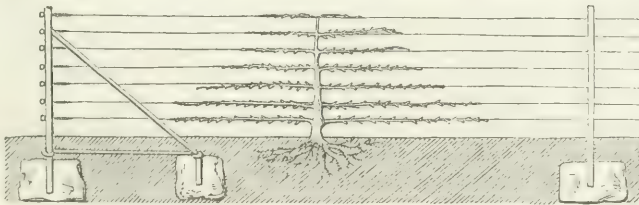
MANETTI ROSE STOCK.—I have cultivated this stock these 10 years on a portion of my nursery ground, consisting of about three acres of light poor soil resting on a subsoil of gravel. The better part of it is light sandy loam; I find the Manetti to suit me much better than the Dog Rose for dwarf plants; nearly all the Hybrid Perpetuals and Bourbons take freely upon it, and make fine heads. Some specimen plants have stood seven or eight years, and are now full of health, while, if they had been worked on the Dog Rose, or upon their own roots, they would

not have remained healthy above two or three years, having nothing to feed upon but light dry soil. Rose growers, who are fortunately situated on a rich soapy loam, or on a deep loam, or who possess a deep vegetable soil with a cool moist bottom, doubtless find the Dog Rose suit them best. And these are the cultivators whom I have generally heard condemn the Manetti stock. I believe, however, that in most other soils and situations the Manetti is preferable, and it will be highly prized by those who have to contend with light, dry, or poor soils, on which this stock will flourish, when the Dog Rose would scarcely live. A few Roses will not grow well upon it, such as Cloth of Gold, Solfaterre Ophiré, &c.; but as a set-off, it will be found that Robin Hood, Madame Aimée, Hypocrate, Cillet parfait, Superb Shaped, Unique, &c., grow much more robust on it than they do on the Dog Rose, and they produce finer flowers.—*R. B. Bircham Hedenham Rosery, Bungay, Suffolk, in Gardener's Chronicle.*

**FLOWER STANDS FOR GREENHOUSES, &c.**—In small greenhouses, particularly those attached to or near the proprietor's house, where elegance of design and neatness in keeping are attended to, we see not why stages of the ordinary clumsy description should not be entirely dispensed with, and the plants set in elegant vases or flower-stands, having the surface of the pots covered with clean green moss. The subjoined cut represents a flower-stand suited to this purpose, and much used in France. They are of cast-iron or bronze, and not only are the plants tastefully arranged in them, but often little jets are introduced, as shown in our cut. Wherever such an arrangement is intended, we would suggest to have all the tables portable, so that the arrangement may be altered at pleasure.—*M'Intosh's Book of the Garden.*



**ESPALIER RAILING.**—The accompanying cut exhibits a specimen of a cheap, durable, and elegant



espalier railing, consisting of wrought-iron uprights  $1\frac{1}{4}$  inches square, and six feet in height. They are set into large blocks of unhewn stone, sunk in the ground so as not to be seen. The horizontal wires are nearly a quarter of an inch in diameter; and after being very firmly secured at one end, are made to pass through the uprights at about 6 or 7 inches apart from each other. They are then tightened up with a nut and screw at the other end.—*Ibid.*



## Editor's Table.

OUR FRONTISPIECE.—We present this month a plate of eight well-proved excellent varieties of Cherries. We cannot say that we are partial to this mode of illustration—one or two varieties, with foliage, would make a much finer picture; but by giving portraits of eight varieties at once, we furnish a greater amount of information; and this, with us, is the main point. To a large number of the readers of the *Horticulturist*, these varieties are well known, while on the other hand, many who have more recently engaged in fruit culture, know but little about them. At any rate, we feel that we cannot do wrong in making still more widely and favorably known varieties of such sterling merit.

No. 1. *Elton*—This is one of KNIGHT'S English varieties, said to have been a cross between the *White Heart* and *Yellow Spanish*. Fruit large, heart-shaped, long, or pointed pale yellowish-white, nearly covered with light red. Flesh half tender, juicy, and delicious. Tree a strong grower, spreading, and somewhat irregular, with large leaves, distinguished by reddish petioles, or leaf-stalks. It may be placed among the early varieties.

No. 2. *Yellow Spanish*, called, also, *Bigarreau* and *Grafton*—A very old variety, supposed to be of Turkish origin, of unsurpassed excellence, succeeding well in many parts of the country. Fruit large, obtuse heart-shaped, yellow, or cream color, with a bright red cheek. Flesh firm, juicy, and excellent. Tree vigorous, and an abundant bearer, generally, forming a handsome, round, regular head. Mid-season.

No. 3. *Knight's Early Black*—One of KNIGHT'S English varieties, said to be a cross between the *May Duke* and *Yellow Spanish*. Fruit medium to large size, obtuse heart-shaped, with a stout, short stalk. Skin quite black when ripe. Flesh tender, juicy and rich. Tree of medium size, spreading, forms a handsome, regular, round head. Early.

No. 4. *Napoleon Bigarreau*—A very large and beautiful French, or Dutch variety, resembling the *Yellow Spanish*, but larger and more oblong; not first quality, except when ripened in fine, dry weather. Tree vigorous, erect, and regular in growth, with large, heavy leaves, and a prodigious bearer, will produce almost twice as many as the *Yellow Spanish*. Rather late, succeeding the *Black Tartarian*.

No. 5. *Reine Hortense*—A large and beautiful French variety, belonging to the *Duke* class; somewhat oblong, bright red, tender, slightly acid, but rich and delicious. Tree an erect, regular and handsome grower, makes a beautiful pyramid or small standard on the Mahaleb stock for gardens. Ripens late, and hangs long on the tree. A moderate bearer when young, increasing in fruitfulness with age.

No. 6. *Barr's Seedling*—Originated by Mr. ZERA BARR, of Perinton, near Rochester, some eight or ten years ago. A large, handsome variety, somewhat like the *Elton*, but not so pointed, nor scarcely so large, generally. Tree remarkable for its erect and handsome growth, and for growing very late in the season, so late that the tops of the shoots are often winter killed, which is an objection to it in very cold latitudes. Rather early.

No. 7. *Downer's Late Red*—Originated by SAMUEL DOWNER, Esq., of Dorchester, near Boston. Fruit large, roundish, light red, slightly mottled with amber, in the shade, tender,

juicy and sweet. Tree an erect, rapid, and handsome grower, and produces abundant crops of fruit, which are borne in large clusters, and hang long on the tree. Rather late. Season at Rochester about middle to end of July.

No. 8. *Black Eagle*.—One of KNIGHT'S English varieties, like the *Knight's Early Black*, a cross between the *Yellow Spanish* and *May Duke*. In form and color it resembles the *Knight's English Black*, but has a longer and more slender stalk. Fruit large, high flavored, and excellent. One of the best, if not the best black among the old well proved varieties in cultivation. Tree vigorous and hardy, forming a handsome, regular, round head.

HINTS FOR THE SEASON.—Owing to the backwardness of the spring, kitchen garden crops will be later than usual in many parts of the country; the first sowing, both in frames and in the open ground, were lost through sudden changes and protracted periods of severely cold weather in March and April. In this part of the country we had no good growing weather till about the 5th or 6th of May. Much may be done to make up for this, by selecting such varieties of vegetables as come most quickly to maturity, and by encouraging their growth with extra care and cultivation, a constant use of the hoe, and frequent application of liquid manure, should the weather be dry. It should be borne in mind that a constant supply of vegetables, of the best quality, cannot be kept up without good management in regard to successive sowings. This is especially the case with Radishes, Peas, and String Beans, which are only fit for use in a young state, and for a short time. Lettuce is another thing of which a continual supply of young plants should be kept up by every one who wishes a good salad for the table every day. Too little attention is given to the culture of vegetables for soup. Our American housewives give too much attention to cake and confectionery, and far too little to soups. No dinner table in this country should be without its soup. The kitchen garden should send into the cook a regular daily supply of small Carrots, Turnips, Leeks or Onions, Parsley, with a little of such flavoring herbs as Thyme, Sweet Marjoram, Summer Savory, Mint, &c. We wish that some of those good ladies who are devoting their time to public affairs, would turn their attention towards revolutionizing our system of cookery. The preparation of food is a science, if women would so regard it; few of them, however, give it the least attention. They can boil or bake a Potatoe, roast a joint of meat, and make two or three sorts of pies or puddings; and there is an end of it. Our miserable system of cookery is a cause leading to a rapid deterioration of the race.

THE FLOWER GARDEN.—*Bedding out Plants*.—In many parts of the country it is not safe to trust bedding plants from houses or frames, to the open garden, before the first of June. We prefer waiting until the weather is settled, the ground well warmed, and all danger of frost over. Then get well-established plants, bed out thickly, water overhead freely in the evenings, and the ground will soon be covered; thinly planted beds look meagre. Among the plants adapted to our summer climate, the *Verbena*, *Petunia*, *Scarlet Pelargonium*, *Heliotrope*, *Salvia*, and *Lantana*, are prominent. The *Cuphea platycentra*, *Argemone caelestinum*, *Boucardia triphylla*, and *Veronica Lindleyana*, are also excellent plants for this purpose. Select pure and brilliant colors, and arrange the masses of each so as to produce the greatest effect. A great variety of plants is not so essential to the formation of glowing masses of flowers as an abundant supply of the best sorts.

*Dahlias*.—Plant the first and second week of this month, (we seldom plant our principal stock till the latter end); strong, well-established pot-plants, raised from cuttings, are bet-

ter than old roots, for a fine show of perfect flowers. Give them plenty of room—at least four feet every way. Turn out of the pots without disturbing the roots, and set a neat stake with the plant, to which it can be secured as growth proceeds.

The following are a few of the finest new varieties; most of them we have proved, and can vouch for their being first-rate:

*Agnès*, (Edwards,) pure white.

*Aurora*, orange buff.

*Bob*, (Drummond,) vivid orange-scarlet.

*Grand Duke*, (Turner,) bluish-lilac.

*George Villiers*, (Union,) dark purple.

*Miss Caroline*, (Brittle,) white, slightly tipped with purple.

*Morning Star*, (Turner,) orange-scarlet.

*Plantagenet*, (Turner,) purple, shaded with lilac.

*Sir John Franklin*, (Turner,) buff, with salmon at the base of the petals.

*Sir R. Whittington*, (Drummond,) ruby crimson; a large, perfectly formed, superb flower.

Fancy varieties (so called), striped and tipped:

*Beauty of the Grove*, (Burgess,) salmon buff, tipped with purple.

*Claudia*, (Lochner,) violet-purple, tipped with white.

*Douglass Jerrold*, (Keyne,) buff, edged with scarlet.

*Duchess of Kent*, (Knight,) pale yellow, tipped with white.

*Queen Victoria*, (Wheeler,) yellow, distinctly margined with red.

*Unanimity*, (Edwards,) scarlet, and deep yellow in regular stripes.

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A SEEDLING APPLE.—R. B. WARREN, Esq, of Alabama, Gen. Col. N. Y., very kindly sent us a box of handsome Russet Apples, about the size of our *Golden Russet*, (described in some of the books "*English Golden Russet*," ) but more of a grey color, like the *Pomme Gris*. It is very regularly formed and fair, but although of good quality does not equal the *Golden Russet* in richness. It keeps well, and from what Mr. WARREN says of its productiveness, it is undoubtedly worthy of cultivation. Mr. W. says:—"The tree bears a large crop every year; (this year seven barrels). The Fruit is good sized, fair and smooth. The samples sent, are, perhaps, rather above the average size. They keep well till June. The tree is about twenty years old, and there can be no doubt of its being a seedling."

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THE New York Horticultural Society, like the Crystal Palace, has been thoroughly re-suscitated by Mr. BARNUM, and people are crying out that BARNUM's name will give success to any thing. This, however, is a great mistake. If BARNUM would sit down and fold his arms, and merely wish for success, or beg assistance, his name would very soon lose its prestige. This talk about men's *names* doing this or that, is perfectly childish. Success, in everything, depends upon well laid plans carried out with boldness and energy. BARNUM's programme for the re-opening of the Crystal Palace shows that he depends upon his name for nothing. Societies and Institutions that are sighing for a BARNUM to animate their lifeless bodies, would do well to observe his management.

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WE learn from the English papers that Mrs. LAWRENCE, of Ealing Park, has disposed of her magnificent collection of plants, in consequence of delicate health. She had no less than twenty-three glass houses, and her plants have, for many years, been the finest in all England.



MR. MATHEWS' remedy for the Curculio has been communicated to Messrs. CHAS. DOWNING, of Newburgh; C. P. WILLIAMS, of Albany; and J. J. THOMAS, of Macedon; who are to constitute a committee to put its efficacy to the test. We may expect a reliable report, but we presume it will require several years to experiment. Mr. FAHNESTOCK objected to the large committee previously appointed by our State Society.

TO CORRESPONDENTS.—Correspondents will oblige us by bearing in mind, that all letters on business should be addressed to the Publisher *only* in order to secure attention; and all communications, inquiries, &c., for the Editor, should be addressed to him. The observance of this, will relieve all parties from many little needless annoyances.

CRITICISMS ON HORTICULTURIST.—In the April *Horticulturist* I notice some of your correspondents think you are ruining the work with Pears, Peaches, &c., &c. Now, having the *Horticulturist* from the commencement, and speaking for myself individually, I would beg leave to differ entirely from such a statement.

However much I may have admired Mr. DOWNING, and there are but few men that more cordially endorsed him in his Horticultural views than myself, yet, since the commencement of the *Horticulturist* there has been no single feature that I more heartily endorsed than your articles and illustrations on Pears, and I most sincerely hope you will not abandon this feature, without good and sufficient reasons, and a stronger sentiment from correspondents than you have yet noticed.

The portion of illustrations relating to flowers, do not, I am free to confess, interest me much, but I doubt not there are thousands of your subscribers who do feel an interest, and as deep an interest, too, in that department, as your correspondents do in any thing they may fancy.

In regard to the pruning of the Peach: I had given much attention to that subject, having *Downing's Fruit and Fruit Trees*, *Barry's Fruit Garden*, and the *Horticulturist*, and was really green enough to believe that I had about mastered the subject, before you commenced publishing the article complained of, which, although not strictly applicable to this country in every particular, yet it is enough so that a man of the most ordinary comprehension cannot fail to profit by reading, if he has a single tree to train and prune.

As a case in point, I would state to you that at the commencement of the year 1853 there were two copies of the January number sent me. The extra number I sent to a friend of mine, who had given some attention to fruit, and he was so well pleased with the feature on Pears that he subscribed for the work, and will probably continue to take it so long as it occupies its present position.

What do your correspondents recommend in place of those magazine-splitting subjects complained of? I would much like to know, and perhaps some other reader of the *Horticulturist* would also be glad to learn, so that you could be warned in time, before you had split on some sunken rock without a possible chance of salvation. BOARDMAN.

A REMEDY FOR THE SCALY APHIS.—About two years ago I put into a thirty-two gallon cask twenty pounds of sulphur, with about three shovels full of lime, filling up the cask with water, using fully half of the solution at the time, for syringing Roses, &c., that were effected with the mildew; the remainder had stood for three months, and had become very strong, assuming a deep red color. I had at this time a plant of the *Epiphyllum speciosum*: that was so badly affected with the white scale, that I had taken it out of the house two or three months previous to its undergoing the operation I am about to speak of. I may here remark that this plant was in a worse condition than any living plant I had ever seen. I picked it up one day with a view of burning it, thinking it the best mode of getting rid of the live stock, but as I passed the cask con-

taining the solution I thought I would try the opposite element; so I stirred up the ingredient and dropped the plant in, letting it remain about three hours. During this time the liquid had become clear, and the plant entirely coated with the sediment. I took it out and put it on the stage in the greenhouse, and when it required water, I watered it with this solution in a clear state. In a very short time it began to show signs of returning life; the shrivelled parts began to swell out—the coating it got by its immersion falling off in flakes. I now shifted it into a large pot, still continuing to water it with the sulphur water, until the fresh earth had become thoroughly impregnated with the sulphur. It now grew rapidly, and became as healthy a plant, and the green as beautiful, as I ever saw. This plant is now full of flowers, and has never been affected with the scale since. Having several large Cacti that were affected with the scale, and being too large to put in the cask, I gave them about five or six waterings with the same water, and they soon became perfectly clean. I then watered all the Cacti I had with the same water, whether clean or no. This is now, as I stated before, two years since. I have not used any sulphur water on any of them since that period, and on examination I find they are all clean and healthy. Therefore I have come to this conclusion, that if the soil the Cactus grows in, is impregnated with sulphur, the plant never will become affected with scale, for this reason: the sulphur is taken up by the roots, and is thoroughly di-seminated through the plant, at the same time rendering the plant unwholesome to the scale. ROBERT MESTON.—*Ashtwood, Tenn*



HAMPTON'S NEW SIBERIAN CRAB.—One of six seedlings from the Siberian Crab, all of which are different.

Size—large for a Siberian. Form—ovate conical. Color—a deep, rich crimson, blotched and indistinctly striped with clear orange and yellowish red. Blossoms—large. The tree presents a splendid appearance when in blossom, and when loaded with its dark, crimson fruit, is highly ornamental; and the fruit is excellent for preserving, being of a sweetish, astringent flavor. Season of maturity—October and November. Raised by WILLIAM C. HAMPTON, of Dudley, Hardin County, Ohio. W. C. H.

COOPER'S MARKET APPLE.—The above variety of Apple, it is understood, was introduced here by Mr. SCHENCK, of Brighton, who brought it from New Jersey. It is a beautiful medium sized Apple, tart, when first in eating, but when fully ripe, quite mild and agreeable, during all the month of May. It is one of the most perfect keepers, and our fruit dealers have found a ready sale for it this season. High colored when grown in the sun, and sometimes beautifully mottled. The tree blossoms later by two weeks than other kinds, except the *Russet* and *Northern Spy*. It is a desirable Apple for *Market*, and very properly named so on that account. J. H. WATTS, *Rochester*.

With the above note Mr. WATTS was kind enough to hand us some very beautiful specimens of this fruit, as fresh and juicy as we would expect to find them in mid-winter. We have observed them frequently in the baskets of street dealers, late in the spring, competing with the *Northern Spy*. It deserves more attention.

TOO HAPPY AT HOME!—To *Elsie, Woodside*—So unexpected a prescription for my cure, as you have proposed in the May number of the *Horticulturist*, while it calls for my grateful acknowledgments, requires consideration. An exchange of situations, if it takes place, must be discussed. Will you take, with my perfected place, all its inconveniences? Will you, or your husband, accept the gout, and rid me of it? This, you will say, can hardly be expected. Well, I suppose you would not, if it were possible, desire my bodily ills. But are you prepared to spare time enough from your troop of Olive plants to see after all that it is necessary to do yourself on my premises? The task is not a light one, and that you may be prepared a little for what will be necessary, I will give you a few items to consider of.

The more pressing at this moment is to see after a neighbor who deserves not the name. He turned off the stream of water which fed my fish ponds, last February, to supply his own water-ram. The law, after much expense righted me, and when I had re-stocked my trout preserves, the villain has just poisoned the rivulet: my pets all turned over, last night, perfectly dead. I have to see my attorney in the morning, enter suit, and attend to this most annoying affair for several months. Will you, or your good man, carry on the suit for me while I am improving for you? Is he a lawyer, or has he any fondness for litigation? Let me know that, before I decide.

You say you have a fondness for having every thing in its place. Will you promise not to dry clothes on my new *Araucarias*, *Rhododendrons*, and funeral *Cypresses*, or hang your caps on my choice *Rose* bushes, while I am delving in your reserved acres of primitive forest? My library! What shall I do without *it*? And will you promise your children shall not ruin my "picture books," or scratch my *Florentine* tables—my small but *recherche* collection of statuary? Will you guarantee the *Roses* of *Ariadne* and *Psyche*? Shall the birds which *Virginia* is feeding have all their plumage perfect when I return? My gardener is a good one, and understands my ways: will you guarantee that he will be here when I get back? And if he leaves you in a pet, or goes on a drunken frolic to spite you, will you see after the fires in the *Orchid* house, the coldest nights of next winter, every hour or two, if, at the same time, one of your children has the whooping cough or the measles? Does your husband thoroughly understand trimming dwarf fruit trees? And is his temper such as not to spoil my favorite riding-horse? Do you really think he could manage my *Irish* coachman, and make him keep the gears of several kinds perfectly greased? And if he goes from home a day or two without notice, will you oversee your helpmate so much as that the horses shall be fed, curried, and nicely put to bed? Has he a fondness for currying? I have several famous breeds of dogs who require daily looking after, and to be regularly exercised, and you must see that they do not kill my family of tame grey squirrels; and then there are the lop-eared rabbits, to be daily and nightly protected from dogs and cats. The aviary I will surrender to your care—but will you be sure to close off the water from the fountains just before the first freezing weather? Or when I return shall they be found all *burst*? Is it in your



power to superintend underdraining a few acres I have lately bought, and can you give me the address of the maker of the best tiles? There are many other matters requiring consideration, but as I received the *Horticulturist* late in the month, I must defer naming them till you have a little breathing spell. You have by this time, perhaps, perceived one other cause why staying at home is necessary; there may be other reasons than being "too happy." There is too much to take care of.

Meantime, if you should come eastwardly this summer, ask Mr. BARRY to give you a letter of introduction to ATTicus.

### Answers to Correspondents.

ALLOW me to ask a favor, and answer me under the head of correspondence. I consider myself a novice in the nursery business, and labor under great disadvantages in budding Peaches. I generally suffer a loss of one-half of my newly-budded Peaches in the spring; and Plums also. I have exhausted all my ingenuity, and made no improvements; the buds will appear to be all doing well, pushing out until the leaf makes its appearance, and then great numbers come to a dead stand; after some warm, dry days, they become loose and drop off, the same as winter-killed blossom-buds do. I have *Doering's Fruit and Fruit Trees of America*, *Cobb's Fruit Book*, and your *Fruit Calendar*, and have been a constant reader of the leading journals of the day, and have never found anything to this purpose; the loss is no small item to me. Please give me what light you can on the subject. (1)

I found my Gooseberries attacked by an insect which destroyed my whole crop; last season the crop fell prematurely from the bushes; upon close examination they appeared to be punctured as with the point of a needle. In the transparent varieties, I could see the windings and courses the young larva had taken, and when full grown, would eat its way out, and make its way into the ground. The size of the worm is about one-fourth of an inch in length, white, somewhat slender, with a head quite black. The insect is new to me, and I feel very much alarmed about my next crop. (2) We annually rejoiced over a lovely crop of Gooseberries; they were always exempt from mildew. The remedy I resorted to, was to shake down all the fruit, which was an easy matter, and drag them into the walks to be trodden upon; but the scorching sun soon finished the cooking process, until life was extinct. Any information you can give me on the above will be thankfully received.

Peaches will be a total failure in our locality the present year; the blossoms are all winter-killed. SAMUEL STONER—*Humberstone, C. W., April 17, 1854.*

(1.) Bud early in the season, and use shoots to bud from on which the leaf-buds are small.

(2.) We have not seen such an insect as you describe. Send us a specimen the coming season, if you can.

You know a person sometimes gets confused, and either commits a blunder, or does nothing at all. It is thus with me, in relation to the application of tan-bark to Strawberry beds.

An intelligent amateur, on the Hudson, in detailing his experiments with the Strawberry, in your instructive *Horticulturist*, says, he applies tan in the *fall*, up to the crown of the plants, (not stating how thick), and in the spring levels, and makes it equal over the bed, to the depth of three inches. He also recommends mulching with tan, immediately after planting in the spring or summer. Another recommends applying tan in the *fall*; another in the *spring*. One makes use of the term "*fresh tan*"; one "*spent tan*"; and another "*old tan*".

Some six or seven years since, I mulched, in December, after the ground had frozen up, three-fourths of a Strawberry square, with tan that had been about my premises for at least eighteen months, and for three years thereafter there was a marked favorable difference between the part mulched and the remaining quarter. The tan was spread evenly over the whole surface, to the depth of about three inches.

In the fall of 1850, I had about one-fourth of an acre of fine appearing plants, scarcely one missing, set out the previous spring. This bed I covered with tan just drawn from the tannery. This application was made before the ground was frozen. The result was, that nearly the whole were dead in the spring; and those having any life, so stunted as to amount to nothing. The varieties were *Hovey's*, *Large Early Scarlet*, and *Willey's*. The soil sandy loam, and stiff loam.

Now I think this result was effected by the tan. Am I right? One of my neighbors, also, attributes the loss of his plants to the same cause.

I have just planted out a few squares of favorite varieties, and am desirous of mulching them, with something. Shall I do it with "tan-bark," "*fresh tan-bark*," or "*old tan-bark*,"—and how deep—and in the fall shall I cover crowns and all—and on the opening of spring is it necessary to remove it from the crowns, or will they push through it?

Will you please, Mr. Editor, give us in the next number of the *Horticulturist*, your views on this subject, and in a

minute and particular manner—not only for my benefit, but the public benefit—especially those who are afraid of tan-bark as a mulch for Strawberries?

It is more convenient to procure tan-bark that has been used at a white lead manufactory. Is there any objection to this?

I propose trying the experiment recommended by Dr. HULL, Mr. PARDEE, &c., on a few rows—*potash, ammonia* &c. May this stimulant be applied directly over the plants and leaves, or carefully poured around them? They do not state.

Is there any objection to spading tan into the soil, after having been used as a mulch, for three or four years? T.

We regret being unable to enlighten our correspondent on the subject of tan, as we have not used it as a mulching for Strawberries, and are not chemist enough to answer from theory. Will some of our readers do us the favor to reply? Many statements concerning it have appeared, but generally given so vaguely as not to be reliable or satisfactory. "T." alludes to this, and not without reason. As to "spading down the tan," we should say, with reference merely to its mechanical effect, that on heavy soil it might be good, but on light porous soils, injurious, except in cases where tan remained so long on the surface as to have been converted into mold.

THE NEW WILLOW.—In answer to your correspondent, "C. W. P.," Newton, Mass., in the May number of the *Horticulturist*, respecting the new Willow, all I can say of it is, that it came originally from Gloucestershire, (England), without a name, and as far as I can ascertain has no name there, and is not described in any book on the subject, and our correspondent in England says, give it a name, for it is more valuable for all purposes, than any Willow with which he is acquainted.

It will be for sale in the fall by Dr. C. W. GRANT, Newburgh, N. Y. He has called it the Beveridge Willow, *Salix Beveridgei*. CHARLES DOWNING.

### Horticultural and Agricultural Societies.

MASSACHUSETTS HORTICULTURAL SOCIETY—*Saturday, April 1st, 1854.*—The President (Hon. J. S. CABOTT, of Salem), called the meeting to order. The minutes of the last meeting were read by the Secretary, (Mr. W. C. STRONG).

The President presented a communication from Mr. PARKER, proposing to purchase the estate in School street, owned by the Society. Referred to Executive Committee.

On motion of R. M. COPELAND, of Roxbury, a committee of three was appointed to report upon the practice of scraping ornamental trees. Mr. COPELAND exposed the folly of this practice, now so common, and explained why it was injurious to the tree. He thought that the Society would confer no small benefit on the community, by a warning report.

The motion was opposed by Mr. C. M. HOVEY, and carried. The Chair appointed Messrs. COPELAND, W. S. KING, and A. BOWDITCH to constitute the committee.

W. S. KING called the attention of the Society to a report, widely circulated and generally credited; which, he said, was calculated to injure the character of the Society, if true, and which, if unfounded, should be at once publicly denied. The report was, in effect, that the Fruit committee had, upon at least one occasion, been called together by a person other than the Chairman of the Committee, and without the knowledge of the Chairman; and that at such meeting "a Gold Medal worth \$10," had been awarded for a seedling Cherry, to the person who had called the meeting; and that the claims of another seedling, confessedly superior (Mr. WALSH's Seedling) had been ignored; that the award was made by a minority of the Fruit Committee, and that the Chairman was not present at such meeting, nor, until some time subsequent, aware of such award.

Mr. KING stated that he did not vouch for the exact truth of the report, in all its details, but

enough was known to be true to warrant a Committee of Inquiry; therefore moved:—That a Committee of three be appointed, by nomination, to examine into all the circumstances attendant upon the award of a Gold Medal to Mr. C. M. HOVEY, for a seedling Cherry; and to report to the Society.

The motion was carried, and MESSRS. W. S. KING, SAMUEL WALKER (Ex-President), and W. C. STRONG, were appointed such Committee.

**BROOKLYN HORTICULTURAL SOCIETY.**—A friend kindly sends us the following account of the first general Exhibition of this promising young Society:

"I have been to-day, by invitation, as a judge of the "Brooklyn Horticultural Society." This has been their first meeting (except their monthly ones), and so far as I am able to observe, it is the beginning of a new era in this neighbourhood. Their working men seem to go into it with practical experience and matured enthusiasm. They have only been organized about ninety days, and already number over five hundred subscribers. They have got many influential and wealthy gentlemen as supporters, and who seem to be aware of the advantage of leaving the working to those of experience. The result, so far, has surpassed their most sanguine desires, and to-day's display does them credit. The show of plants is more select than numerous, and there are many examples of superior skill in cultivation, particularly in specimen plants, many of which would grace the tables of a British exhibition. Those of LOUIS MENAND, of Albany, are fine, *some of the best Ericas I have seen in this country.* He also showed a noble *Leora coccinea*. The show of stove and greenhouse plants were in good quality and quantity. The Fuchsias were really fine; the Pelargoniums choice; Calceolarias numerous, and some of them good; Azaleas scanty, and but so-so, (rather too late for them); Roses not numerous; Cut Flowers the same; Bouquets and other arrangements of like character choice, but not in great quantities. Mr. RAVEN had a good stock, and some things very rare, among which were the gold and silver striped *Anaetochilus*. Mr. GRAEFF had a very numerous show of Calceolarias, &c., which filled up a large space. HOGG, of Yorkville, had a large table, among which were *Dacrydium cupressinum*, *Cupressus funebris*, each six feet high, *Rhynchospermum jasmynoides*, &c. Mr. CUMMINGS also exhibited some good things, but not for competition. Vegetables were scarce, particularly for the neighborhood, and there was one dish of very creditable Grapes. Taken altogether, the thing has been successful and satisfactory, and I understand that you will have, shortly, an official and more detailed account."

**PENNSYLVANIA HORTICULTURAL SOCIETY.**—The stated meeting of this Society was held on Tuesday evening, May 16th, 1854. The President in the Chair. The Hall was thrown open at 5 o'clock, P. M., and was graced by the elite of the city. A finer display has not been shown before the Society for many years. Contributions were brought from nearly all the Greenhouses and Conservatories in the vicinity. Premiums were awarded as follows:

By the Committee on Plants and Flowers—*Pelargoniums*, 8 plants, for the best to Robert Buist; *Specimen Pelargonium*, for the best to Robert Buist; *Cinerarias*, 8 plants, for the best to Thomas Richardson, New York, (very fine, and attracted special attention); *Roses*, for the best and the second best to F. Allgier; *Tulips*, cut flowers, for the best to G. W. Earl; *Collections of Plants*, for the best to John Pollock, gardener to James Dundas; for the second best to Robert Buist; for the third best to Thomas Robertson, gardener to B. A. Fahnestock; *Specimen Plants*, for the best to John Pollock; for the second best to James Kent; *New Plants*, shown for the first time, a premium of \$4 to Robert Buist for Orchids, Geraniums, and Begonia Zanthina; of \$1 to John Pollock for Orchids; *Table de sign*, for the best to Jerome Graff, gardener to C. Cope; *Baskets*, for the best to Jerome Graff; for the second best to Alex. Burnett, gardener to H. Pratt McKean; *Indigenous Flowers*, for the best to Meehan & Saunders; *Bouquets*, pair, for the best to Jerome Graff; for the second best to James Kent. *Special Premiums*—\$3 to Charles Miller for a collection of plants; \$2 to John Pollock for Gloxinias and other plants; \$2 to Thos. Richardson, N. Y., for beautiful Calceolarias; \$2 to John Sherwood for a collection of Roses.

The Committee called particular attention to a beautiful collection of miscellaneous plants by Wm. Sinton, gardener, to Mrs. Dr. Rush, to which they award a premium of \$5. They also call special attention to two very fine specimens



of *Strelitzia regina*, for which they award a special premium of \$3 to Isaac Collins, gardener to Gen. Patterson. Attention was called to a good collection of cut flowers, from Mrs. Holbrook, New York, David Scott, gardener.

By the Fruit Committee—special premiums, viz:—To Albinus L. Felton, for a fine collection of Strawberries in pots, with ripe fruit, \$3; to Jerome Graff, gardener to C. Cope, for four bunches of black Hamburgh Grapes, \$2; for seven fine Lemons, from H. N. Johnson, \$1. They also notice a dish of fine Apples from Dr. Hull, of Alton, Ill., deposited by H. N. Johnson.

By the Committee on Vegetables—*Rhubarb*, 12 stalks, for the best to Samuel Cooper; *Asparagus*, 24 stalks, for the best to James M. Tague; for the second best to Jerome Graff. *Vegetables*—Display for the best by a market gardener, to A. L. Felton. And a special premium of \$1 to Jerome Graff, for 3 dishes of very fine Tomatoes.

**HARTFORD COUNTY HORTICULTURAL SOCIETY.**—At the annual meeting of the Hartford County Horticultural Society, the following gentlemen were chosen as officers for the year ensuing, viz:

WILLIAM W. TURNER, *President*. HENRY MYGATT, Farmington; JOHN M. NILES, JOHN S. BUTLER, HENRY W. TERRY, Hartford; CHARLES L. PORTER, East Hartford; NOAH W. STANLEY, New Britain; NORMAN PORTER, Berlin; E. A. HOLCOMB, Granby; SALMON LYMAN, Manchester, *Vice Presidents*. GURDON W. RUSSELL, *Recording Secretary*. THOMAS R. DUTTON, *Corresponding Secretary*. P. D. STILLMAN, *Treasurer*. H. L. BIDWELL, *Auditor*. H. A. Grant, Joseph Winship, George Beach, Jr., John H. Goodwin, H. L. Bidwell, Henry Affleck, Daniel S. Dewey, G. B. Hawley, Geo. Affleck, Charles T. Webster, H. D. Welles, William F. Tuttle, *Standing Committee*.

**AMERICAN POMOLOGICAL SOCIETY.**—*New York State Committee*:—P. BARRY, Rochester; J. J. THOMAS, Macedon; CHARLES DOWNING, Newburgh; S. B. PARSONS, Flushing; JOHN B. EATON, Buffalo.

The duty of every State Committee, as defined in the by-laws, is "to forward to the general Chairman, one month before every meeting, state pomological reports, to be condensed by him for public action."

**NEW YORK STATE AGRICULTURAL SOCIETY—FAIR OF 1854.**—The Fair for the present year is to be held in New York city on the 3d, 4th, 5th and 6th of October. By the following proceedings of a meeting held in New York, May 5th, it will be seen that the American Institute, and the New York Horticultural Society are to unite with the State Society, which will, no doubt, make the show, the present year, exceedingly attractive:

"Mr. L. G. MORRIS, from a committee appointed by local committee of New York to confer with the American Institute, in relation to united action in the Agricultural Department at the next Fair—reported, that the committee had performed their duty, and presented the resolutions adopted by the Institute:

"*Resolved*, That, in view of the Fair of the State Society being held in this city during October next, it is inexpedient for the Institute to hold any Agricultural Fair the present year, except as in connection with the State Agricultural Society.

"*Resolved*, That this Institute will hold an Agricultural Fair in connection with the State Agricultural Society.

"On motion of JOHN A. KING,

"*Resolved*, That the Executive Committee concur in the resolutions of the American Institute.

**NEW YORK HORTICULTURAL SOCIETY.**—Mr. P. B. MEAD, Secretary of the Society, was present on behalf of the Society, who propose to unite with the State Agricultural Society in the Horticultural Department of the Exhibition. The list of premiums prepared by P. BARRY, Esq., Editor of the *Horticulturist*, Rochester, at the request of the Executive Committee, was considered, and after additions and amendment, was adopted.

"The general Premium List was also taken up and adopted with various additions and amendments to the original report.

"The appointment of Judges was then taken up, and the list having been again considered, the various committees were filled by the Board and the attending Committee of the Institute.

"The Secretary was directed to prepare 3000 copies of the Premium List for distribution, and 1000 copies of a Circular calling the attention of the public to the united Exhibition to be held.

"The President was directed to correspond with the Railroad and Steamboat Companies, in relation to the usual arrangements for the transportation of stock and articles free, and visitors at reduced rates.

"Adjourned to the first Thursday in June.

"*New York, Friday, May 5th.*

B. P. JOHNSON, *Cor. Secretary.*"

PUTNAM COUNTY (IND.), AGRICULTURAL SOCIETY.—The fourth annual Fair of the Putnam County (Indiana), Agricultural Society is to be held at Bainbridge, on the 14th and 15th days of September. A fine and well arranged list of premiums are offered. Among the premiums we notice about twenty volumes of the *Horticulturist*. For thus remembering us, our kind friends in Putnam County have our best thanks; it is an example that might well be imitated. The following are the premiums offered on *Vegetables, Fruit, and Flowers*:

*Vegetables*.—Best specimen of Irish Potatoes, Ag. paper. Best do Sweet Potatoes, Ag. paper. Best do Parsnips, Ag. paper. Best do Turnips, Ag. paper. Best do Beets, Ag. paper. Best do Onions, Ag. paper. Best do Cabbage Ag. paper. Best variety Tomato, Ag. paper. Best do Pumpkins or Squash, Ag. paper. Best assortment rare vegetables, Hort. colored plates, \$4 00.

*Fruit*.—Best assortment Fruit, all kinds, Hort. colored plates, \$4 00. Best do Apples, Hort. colored plates, \$4 00. Second best do do, Hort., \$2 00. Best do Pears, Hort. colored plates, \$4 00. Best do Grapes, Barry's Fruit Garden. Best six specimens of fall Fruit, Ag. paper.

*Flowers*.—Best Assortment of Flowers, Hort. colored plates, \$4 00. Best do pot Plants, Hort. colored plates, \$4 00. Best do Dahila, Ag. paper. Best do Chrysanthemum, Ag. paper. Best do Verbena, Ag. paper. Best do Geranium, Ag. paper.

*Gardens*.—Best adorned yard, Hort. colored plates, \$4 00. Best garden, Hort. colored plates, \$4 00.

BROCKVILLE HORTICULTURAL SOCIETY.—We are indebted to some friend in Brockville (C. W.) for a nicely printed pamphlet, containing the officers, committees, premium list, &c., for the present year. The premium list is well arranged, and the premiums offered, quite liberal. The first meeting this season, is to be held June 29th, and the summer, or annual exhibition, September 14th, unless the state of the season may render it necessary to change this time, of which, at least ten days' notice will be given. The following are the officers and committees:

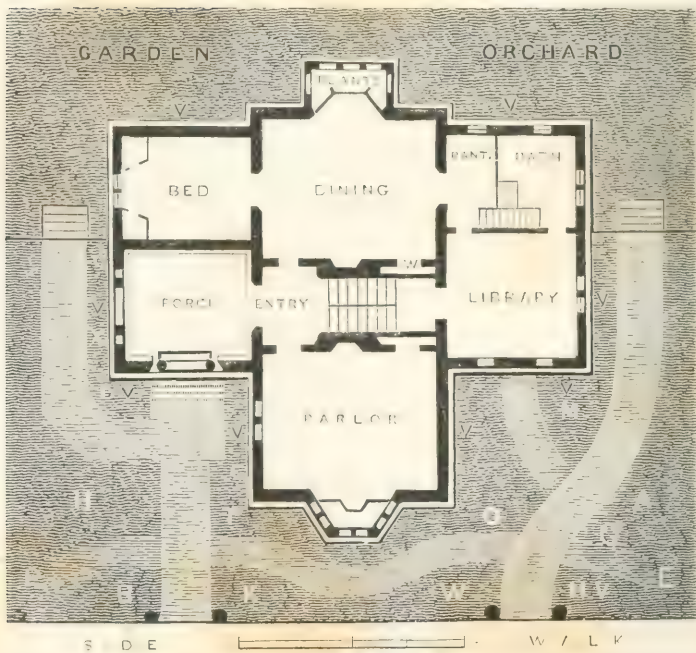
WILLIAM MATTHEW, Esq., *President*. R. P. COLTON, Dr. T. REYNOLDS, *Vice-Presidents*. FRANK M. HOLMES, *Treasurer*. JACOB D. BUELL, *Secretary*. Mr. Sheriff Sherwood, Wm. B. Simpson, James Cameron, George Morton, John Lawrence, Alex. Rodgers, David Wylie, *Directors*.

COMMITTEE OF ARRANGEMENTS.—Mr. SHERIFF SHERWOOD, *Chairman*. *On Flowers*—Messrs. John Lawrence, Wm. Thompson, and Dr. Reynolds. *On Fruit*—Messrs. G. Morton, J. Cameron, and R. Coleman, Jun. *On Vegetables*—Messrs. Alex. Rodgers, Robt. Watson, and W. B. McClean. *On Decorations*—Messrs. F. M. Holmes, W. B. Simpson, and Jas. Crawford. *On Finance*—Messrs. D. Wylie, R. P. Colton, and J. Reynolds.











LONICERA or LINARIA SPECTABILIS.





## Suburban Residences.

THE present is eminently a time of improvement. Go where we will—in the suburbs of all our cities, in our country villages, and far into the farming districts—we find the people busy constructing and re-modeling their dwellings, laying out gardens, and planting trees. At no previous time, in the history of this country, has such a spirit prevailed. The rage for money-making seems at length to have so far abated as to allow men to think of their homes, and to go about making them somewhat comfortable, and even beautiful. This is something to rejoice at. Were it not so, we should ill deserve the overflowing measure of prosperity which Providence has vouchsafed us. Certainly, no people in the world have stronger inducements to improve and beautify their homes, than Americans. Our present purpose, however, is not to expatiate on this subject, pleasant though it be, but to call attention to a certain defect, which we apprehend is very general among modern suburban residences.

There seems to be a prevailing passion for building on the most public thoroughfares, and for making an undue display of the dwelling and every portion of the ground, to the public. Now this is manifestly a great mistake. *Quiet and seclusion* we have always regarded as among the most important requisites, and, indeed, the greatest charms of a country or suburban residence. What is it that people seek, who retire from the crowded streets of the city, and erect for themselves a dwelling on an acre or two of ground, in the suburbs? Do they go there to erect a costly house, make a beautiful lawn, and plant fine trees, merely to be gazed at and admired by the public? Or do they not rather seek relief from the noise and bustle of the streets, and a quiet, retired place, in which themselves and families may enjoy pure air, and healthful, pleasant recreation? This, we believe, is the aim of by far the greater number; a few, only, are prompted by feelings of vanity, or urged by the power of fashion.

We take it for granted that people erect houses, and make gardens and pleasure-grounds, first and foremost, for their own comfort and gratification. We are surprised, therefore, to see such a passion for building on the most public thoroughfares, and we are inclined to attribute it, in a great measure, to the want of experience. Sites for dwellings and gardens can be had at least one-fourth cheaper, on less frequented and much more desirable localities. The only advantage that can be claimed for the leading avenues, is, that they are nearer to the public conveyances; but this is of trifling importance, especially to those who keep a horse and carriage of their own, and in any case, it would be a poor compensation for the countless annoyances inseparable from such locations. But a few days ago, we passed along one of the popular avenues of our city, where, within a few years, a large number of very tasteful residences have been erected, each having a garden in front, varying from 50 to 100 feet deep. It was a dry time, and the clouds of dust that arose from the street, (thronged with wagons at all hours), had covered every tree, shrub, and plant, with a thick coat, giving them, at the most delightful season of the year, when gardens should be in the

meridian of their beauty, a most dismal and forbidding aspect. What a mistake, we had to exclaim, to come out of town, and spend so much money on suburban residences, in such a place as this, where to step out of doors is to get deafened with noise, and blinded and covered with dust! Why did these men not rather choose some of those quiet streets that lie among the secluded, rural-looking districts? There they might have tasted some of the sweets of country life, but here they cannot.

Something might be done, however, to make these residences on public streets much more comfortable and agreeable than they generally are. The houses might be set further back, and masses of low trees and shrubs might be planted, to exclude the noise and dust, and give them an air of seclusion and quiet. No matter how retired the situation might be, we would plant sufficiently to shelter the interior of the garden, as well as the dwelling, from the wind, and to protect it from intrusion; so that, at all seasons, and at any time of the day, any member of the family might work, or amuse themselves as they saw fit, without being observed. Very few gardens are sufficiently sheltered. In the north, high winds prevail during the early spring months, so that, unless shelter be amply provided for, it is impossible to cultivate spring flowers successfully, or for ladies, or persons in delicate health, to enjoy daily the pleasures and recreations of a garden at that season.

Farmers gardens and dwellings are, as a general thing, sadly deficient in shelter and protection. The house is usually placed, for convenience, close to the highway, and the garden and door-yard inclosed with low, painted board fences. A row of trees, along the street, is all that seems to them necessary; and the consequence is, there is not a spot that can offer pleasant out-door recreation until summer arrives. Why can they not plant, on the exposed sides of their residences, thick belts of forest trees, to break off the winds, and inclose their gardens with high board fences, or what is much more sightly, Arbor Vitæ screens. Ladies, children, or infirm persons, who may desire out-door exercise, would then have some opportunity of enjoying it with safety and comfort. This provision for shelter, on an ample scale, should be one of the earliest cares of every man who goes about the work of improvement in our boisterous climate, where we have winter full half the year. It is a great sacrifice to people who live in the country or in the suburbs of a city, to be shut up in the house six whole months together. Winter walks and resorts need to be provided more than summer, because in summer almost every place is pleasant in the country.

We do not propose to recommend that people should inclose their gardens with high walls, as though they were prisons, or to surround them with thickets of trees to such an extent as would give them an air of exclusiveness, obstruct their views beyond their own boundaries, or impede too much the circulation of air. These extremes are as much to be guarded against as that of too great exposure. There is a medium which every person of good sense will discover, if they but give the subject due reflection.

A very sensible English writer,\* a professional landscape gardener of much experience, in speaking of laying out the grounds of a villa residence, says of "seclusion":

\* *Parks and Pleasure Grounds*—by C. H. J. SMITH; an American edition, of which has been edited by L. F. ALLEN, Esq.



"This is a quality more or less desirable in all small residences; and in the vicinity of large cities, it may be regarded as indispensable. Of course it does not consist in the exclusion of light and air; neither does it suppose the shutting-out of fine views, whether at hand or at a distance. It is rather the protection of the family from that exposure to public gaze which would prevent them from using any part of their grounds as freely and comfortably as they would their drawing-room. A certain amount of privacy, at least, is essential to that rural feeling which is a principal charm in retirement from the bustle of city life. Some individuals, indeed, seem to have a particular fancy for displaying their flower-beds and lawns to the eyes of the public; a taste, we humbly think, more suited to hotel establishments, than to the abodes of private families. We would have the greater portion of the villa grounds to be possessed of the characters of complete seclusion. At the same time, the error arising from the excess of this quality—the dull, gloomy insipidity caused by over-planting and an over-affectation of privacy—is to be carefully guarded against. On level or gently-sloping surfaces, the proper amount of seclusion may generally be obtained by building the boundary walls from eight to ten feet high. On surfaces with a considerable declivity, such walls will be found insufficient; and as no considerable addition can be made to their height, nor indeed, if added, would prove effectual, the object aimed at must be attained by planting trees and shrubs, which will have to grow for several years, before they afford the desired shelter. As the size of villa residences increases, the difficulties in regard to privacy diminish, as there is room for enlarged masses of trees and shrubs, and the whole place naturally assumes the character of a common country residence."

Another English writer,\* who is also a thoroughly practical man of great experience, says :

"Few characteristics of a garden contribute more to render it agreeable than *snugness* and *seclusion*. They serve to make it appear peculiarly one's own, converting it into a kind of *sanctum*. A place that has neither of these qualities, might almost as well be public property. Those who love their garden, often want to walk, work, ruminate, read, romp, or examine the various changes and developments of Nature, in it; and to do so unobserved. All that attaches us to a garden, and renders it a delightful and cherished object, seems dashed and marred, if it has no privacy. It is a luxury to walk, sit, or recline at ease, on a summer's day, and drink in the sights, and sounds, and perfumes, peculiar to a garden, without fear of interruption; or of dress, or attitude, or occupation being observed and criticised.

"Something more, however, than mere privacy is involved in the idea of *snugness*. It includes shelter, warmth, shade; agreeable seats for rest, arbors for a rural meal, an level-vety slopes of turf, overshadowed or variously chequered by foliage, to recline upon. A room that may fitly be called *snug*, is small in its dimensions, and rather amply furnished, with its window not open at any point to the public gaze. A garden, likewise, to deserve the same epithet, should have its principal or subordinate parts of rather contracted limits, be furnished somewhat liberally with tall-growing plants and trees, which will produce some degree of shade, and present an air of comparative isolation.

"Where there is sufficient extent, it is probably better to have one or more small nooks, or partially detached gardens of a particular kind, to realise something of both *snugness* and *seclusion*, and give the leading and broader portions of the garden a more airy and open

\* *How to lay out a small Garden*—by EDWARD KEMP.



character. Still, in any case, unless it be purely for show, a certain amount of privacy ought, assuredly, to be sought after. And the more thoroughly it is gained, the more pleasurable to most persons, and the more accordant with good taste, will be the entire production."

This principle is applicable in all countries, because the purposes of a garden are everywhere the same. We remember having seen a street garden, in the city of Baltimore, which struck us, at the time, as being admirably arranged, to adapt it to the situation and circumstances. In order to break the view from the street to the house, the ground was thrown up into irregular and natural-looking mounds, and these were planted with trees. The entrance walk was carried through the elevations, and gave a fine view of the dwelling from the street, without causing any objectionable degree of exposure. The same amount of seclusion could not have been obtained without either very high walls, or very thick and formal belts of trees and shrubs. Undulation of surface might, in very many cases, aid in relieving the lawns of cottage residences of that monotony and nakedness which a perfectly level, closely-mown surface presents.

There is another point in the arrangement of suburban gardens, that we think seldom receives proper attention, and that is, the concealment of the fences that form the boundaries, and such other neighboring objects, of a disagreeable or unsightly character, as may obtrude themselves on the view, from either the house or garden. It is impossible to select a situation, in any neighborhood, wholly exempt from objectional features; but, in most cases, they may be excluded from sight, by judicious formation of the ground, and distribution of trees. We know a gentleman who is unfortunate enough to have for his next neighbor a low, filthy fellow, whose premises are an almost insufferable nuisance. He would gladly purchase his ground, and pay him twice as much as it is worth; but he will not sell. Now, instead of having merely a low, open board fence, between him and such a neighbor, he should have dense screens of foliage, to shut out completely such a disagreeable boundary. Rapid-growing trees, such as Silver Maples, Pawlonias, European Larch, and Norway Spruce, will make an effective obstruction, in three or four years. If the grounds be too small to admit trees of such large size, then live hedges, such as Thorn, Osage Orange, Buckthorn; or evergreens, such as Arbor Vitæ, Hemlock, Red Cedar, or Spruce, all of which may be allowed to grow up (for a screen), without shearing, except on the sides.

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### THE DIELYTRA SPECTABILIS.

This charming plant proves to be such an acquisition, both to the garden and greenhouse, that we have thought it fully entitled to a place among our colored plates, and therefore present it as our frontispiece for the present month. We must say, however, to those who have not seen a good specimen in bloom, that the meagre raceme which we have space to represent, conveys but a very imperfect idea of its rare grace and beauty. To see a plant measuring three or four feet in diameter, and bearing

twenty or thirty flower stalks, each with numerous gracefully drooping racemes of the most unique and brilliant rosy flowers, is to see the *Dielyttra* as it should be. We beg to assure our readers that whatever has been said in praise of this plant, has not been exaggerated — that it is no novelty lauded to-day to win it favor with the public, and in six months hence to be cast aside as a “humbug.”

It is now some ten years or upwards since it was sent from China to England by Mr. FORTUNE, the collector of the London Horticultural Society, and since that time it has bloomed among the finest collections of plants in Europe, and in all cases it has elicited unqualified praise. For many years its culture was confined to green-houses and conservatories, as most rare plants are; but latterly, as it became more multiplied, it has been trusted to the garden; and there, in a rich soil, with ample room to spread its roots and gather food, it has developed its native luxuriance and beauty. The finest specimen plant we have seen in this country in the open ground, was in the garden of ABILAH REED, Esq., of Hulberton, Orleans Co., N. Y., a year ago. That gentleman loses no opportunity to enrich his little garden with whatever is new and excellent, and this he considers one of the finest hardy herbaceous border plants he has seen. What adds immensely to its value is its entire adaptation to either house or garden culture, and that it requires only the simplest treatment, out doors or in, to ensure perfect success. It is a plant for the million. Our correspondent, Mr. SANDERS, has given an account of his success in forcing it, and we have been able from our own experience to endorse all he has said. In the garden it is as easily grown as a common *Pæony*, requiring no more than a good deep and rich soil — the richer the better. It is also one of the easiest of plants to multiply — just as easy as a *Dahlia*. We propagate it exactly in the same way, viz., by cuttings of the young shoots, taken off in spring, and placed on a gentle bottom heat. Plants struck thus, and bedded out as are *Verbenas*, *Petunias*, &c., will bloom



DIELYTTRA SPECTABILIS.

finely a long time toward the latter part of the season; and by these succeeding the plants that are allowed to remain in the ground, it may be had in blossom



nearly all summer. It can also be very easily increased by taking up the plants and dividing the roots in spring, before it commences to grow. We feel confident that it will make an excellent window or parlor plant. A large plant put into a pot or box in October, and kept dry the early part of winter in a cool room, where the temperature will be about 40°, or just above freezing, and then brought into a temperate heat about the middle of February or 1st of March, will in a short time be a beautiful object. The annexed wood-cut is given to illustrate in some degree its habit of growth. We remember seeing in an English journal an account of a plant that measured upwards of thirty feet in circumference and five feet high, with upwards of two hundred perfect spikes of blossoms at once. The shoots are succulent, almost transparent, and attain the height of two to three feet. The leaves are somewhat like those of the *Pæony* in form, and the flowers are produced on the young shoots in bending racemes, each having from ten to twenty flowers. These are a brilliant rose color, and in form resemble somewhat a small fancy work bag. The corolla consists of four petals; the two large ones, forming the most showy part of the flower, are compressed and turned backwards at the point, and the two small ones, which project below the others, adhere to each other, and cover the stamens. These latter are whitish. On close examination, the flowers are no less curious and wonderful than they are beautiful.

Mr. FORTUNE described it as one of the most popular plants in China, cultivated with a passionate fondness by the Chinese mandarins among their rarest and most beautiful plants, and that figures of it in bloom embellish some of their finest china-ware. The Chinese name is "*Hong-pak-Montan-wha*," or flower of the Montan red and white. They give it this name on account of the foliage resembling that of the Montan *Pæony*, and the flowers being red and white.

It belongs to the natural order Fumariacæ — Fumeworts of LINDLEY's "*Vegetable Kingdom*"—and, as a French writer truly says, is the queen of them all. It has been variously called *Dicentra*, *Dielytra*, and *Diclytra*. In England and in this country it is now almost universally written *Dielytra*. The French have it *Dicentra*, on the ground that this is the oldest name and the most significant, as it is composed of two Greek words having reference to the peculiar form of the two large petals. The Germans usually write it *Diclytra*; and Prof. BERKLEY, who is good English authority, seems to consider this correct. In a note which appeared in the *Gardener's Chronicle* in July, 1853, he said the vexed question as to the comparative claims of these names is solved beyond a doubt on reference to the original paper in which the genus was proposed. In "*Römer's Archiv. für die Botanik*," (ROMER's Botanical Records), 1797, BORCKHAUSEN, in a paper on the genus *Fumaria*, proposes *Diclytra* for *Fumaria cucullaria* of LINNÆUS, resting its character on the peculiar structure of the corolla and the six distinct stamens. If this be the fact, then *Diclytra* should have the preference, according to the laws of scientific nomenclature.



## THE NEWER DECIDUOUS TREES AND SHRUBS.

BY HENRY W. SARGENT, WODENETHE, FISHKILL LANDING, N. Y.

In addition to the more common and usually planted deciduous trees and shrubs, there has been a great and very charming accession to our ornamental plantations, within the past five or six years. The searches of Dr. HOOKER, Messrs. FORTUNE, DOUGLAS, and the other collectors of the Royal Botanical Garden, at Kew, and of the Duke of Devonshire, have been attended with the greatest success; in addition to which, our own active intercourse with California has very materially increased the variety, which is now becoming gradually acclimatized and adopted into the gardens and pleasure-grounds in this country.

Among the many new and beautiful plants which seem to have proved perfectly hardy, even as far north as Albany, and perhaps further, the *Forsythia viridissima*, and the *Weigela rosea*, are among the most attractive; the former, one of our earliest and most profuse blooming spring shrubs; and the latter, covered with its roseate flowers from the middle to the last of May, partaking somewhat, (though much more beautiful,) of the character of the Fly Honeysuckle.

Among the newer Magnolias, the *M. fuscata*, *cordata*, *Frazeri*, *longifolia*, *striata*, and *gracilis*, all prove quite as hardy as the *conspicua*, *Soulangeana*, *tripetala*, *acuminata*, *macrophylla*, *glauca*, &c., all of which, say twelve or more, are quite hardy here, and should be in all collections.

To this portion of plantations, which all flower about the same time, should be added the *Pawlonia imperialis*; the different varieties of Hawthorn—the single white, red, and pink, [these three grafted on the same stock, have a pretty effect,] the double white, the double red, and the variegated leaf; and the *Andromedas*, [these are ever-greens.] The English Azaleas, than which nothing can be more brilliant and gorgeous, and the newer Belgian varieties; the TRUE *Deutzia gracilis* and *Deutzia scabra*; and the *Ribes sanguinea* (double), the *Ribes Gordoni*, and the *Ribes speciosa*, are all beautiful and rare. The double-flowering Sloe, the double-flowering Plum, Peach, Cherry, and Apple, and the *Spiræa prunifolia*, are all beautiful. To these add the double pink, white and yellow Horse-Chestnut, and the dwarf Horse-Chestnut, all blooming in quick succession.

There is no end to the *Spiræa* family, and they abound in beauty. The many are well known. *Lindleyana*, *Douglasii*, *Reevesii*, and *prunifolia*, are among the newest.

The Chinese Wistaria, if trained to a pole eight or ten feet high, and kept well cut back for some years, will, in process of time, have all the beauty and appearance of a weeping tree, and what is even more valuable, bloom in succession all summer.

The French and African Tamarisks are pretty and hardy.

Among the variegated trees and shrubs, the variegated Sycamore, Oak, Elm, Beach, Chestnut, Maple, Horse-Chestnut, Syringa, Euonymous, Currant, and Thorn, all do well upon this place, and are striking and interesting varieties. The variegated-leaf Dogwood is very rare and curious.

The cut-leaved family is also very curious. The prettiest of these are the cut-leaf Beech, the cut-leaf Horse-Chestnut, and the cut-leaf Ash. Though the cut-leaf Linden, and cut-leaf Birch, are desirable in a collection. [The cut-leaved Birch is, to our taste, one of the most elegant trees recently introduced.—Ed.]

The purple trees and shrubs are the copper and purple Beech, the purple Filbert, and the purple Berberry. A few of these intermingling with the fanciful, gay foliage of the variegated Sycamore, Syringa, Thorn, &c., have the prettiest effect, if not overdone, or too much, or too glaringly exposed.

The weeping trees are now, generally, so well known, as hardly to require mention. The old and new Weeping Birch; the lanceolate-leaved Weeping Birch; the green and purple Weeping Beech; the old green, the yellow, and the lanceolated Weeping Ash; the Weeping Sophora; the Weeping Horse-Chestnut, Oak, Elm, Poplar, Thorn, Laburnum, Cotoneaster, Peach, Cherry (three varieties), Euonymus; besides half a dozen more of the smaller shrubs, grafted standard high, and allowed to weep down, such as the *Caragana arenaria*, *Euonymus linifolia*, *Caragana frutescens*, *Cytisus lessifolia*, &c.

One of the most desirable and beautiful trees, at this season, is the *Virgilia lutea*—beautiful in its habit and foliage, and exquisite in its bloom.

The purple and oak-leaf Laburnum are worth a place in any shrubbery. The oak-leaf Hydrangea is quite hardy and desirable.

For hedging, the most beautiful are the Hemlock, the English Yew, and the Beech; the most serviceable, the Buckthorn, Washington Thorn, and Osage Orange.

Among the Elms, the *Ulmus glabra pendula*, the Scampston Weeping, and the Camperdown Weeping, are very remarkable.

There are a good many fine foreign Elms, not pendulous in their character, yet well worth planting. Such as the Chichester, the Cornish, the Exmouth, the Huntington, the English Cork, the Dutch Cork, the Scotch and the English Upright—a most valuable tree, from its property of retaining its foliage, green, long after the surrounding trees are stripped.

Among the rarer Maples, are the silver striped leaf; the Norway, (the finest, I think, of all Maples;) the *Acer Tataricum*; the English, with a very dense, round, habit of growth; and the purple Maple, with leaves of a rich dark green externally, and of a chocolate brown underneath.

Besides the Ashes above enumerated, are the Willow-leaved; the Aucuba-leaved, blotched with yellow, like the *Aucuba Japonica*; the Myrtle-leaved; and a new and pretty variety, originated, I believe, with MESSRS. ELLWANGER and BARRY.

The Turkey, the Overcup Oak, and the English Royal, Lucomb, and Fulham, and our different American varieties, are, of course, all desirable, where the size of the place will admit.

I shall end this chapter with one more tree, which to my taste is, among deciduous trees, one of the most graceful and fairy-like of all of the large collection I have here, and that is the new Weeping Larch, grafted twelve feet from the ground, and certainly

most charmingly graceful in its swaying, pendulous habit, as much so as the Weeping Willow.

[At our request Mr. SARGENT has very kindly sent us the above notes on deciduous trees and shrubs of comparatively recent introduction. To gentlemen who are setting about improving their grounds, or extending their plantations, and are anxiously inquiring what they should plant, this list will be of great service. We prefer the opinion of an amateur in these matters, provided he have the requisite taste and experience to base an accurate judgment upon, because professional men recognise such trifling distinctions, and are so prone, even honestly, to magnify any novelty of character, that their descriptions are seldom realized by the mass of cultivators. Two Roses, for instance, that a professional Rose-grower would pronounce as dissimilar as possible, would pass for one and the same thing with nine-tenths of the amateur cultivators. So it is in the peculiarities which characterize different species and varieties of trees and shrubs.—ED.]

## A CHAPTER ON PEARS.

BY A. FAHNESTOCK, SYRACUSE.

WHILE the general complaint, during the past summer and fall, was of severe drouth, all around us we were over-supplied with rain, having had a very wet season. The ground on which our specimen trees are located, is rather low and flat, consequently they have had an undue quantity of moisture, during the whole season, on account of which the fruit on the trees were similarly affected; that is, they contained a superabundance of juice, and were not so fine in quality. This we easily detected in the well-known fruits, such as *Bartlett*, *Louise Bonne*, &c.; and the new fruits, as well as nearly all others, partook of the same malady. (1) Therefore our specimens of fruits, although well grown and handsome in appearance, did not come up to their usual excellence; and the quality in 1853, would not compare, generally, with that of the same fruits in 1852. Some allowance, therefore, ought necessarily to be made for those described from their fruiting the past season only.

I will now notice some few misnomers in the trees received from Europe in 1850, and which have been tested for the past three years. They came from the nursery of Mr. ANDRE LEROY:

*Beurre d'Anjou* has proved to be the *Brown Beurre*.

*Beurre d'Anjou Gris* is identical with the above.

*Doyenne d'Ete* has borne nothing but fine *Dutchess de Berri*.

*Belle de Bruxelles* has proved to be much coarser, and far inferior to that variety, but not identified.

We had twelve trees of each of the above described fruits, each and all proving to be wrong, as stated.

*Signoret*.—This Pear has fruited twice with us; resembles the *Belle Lucrative*, in



size, shape, color, quality, and season, and without any hesitation we pronounce it, as well as *Seigneur d'Esperin*, the same as *Belle Lucrative*.

*Beurre Lucrative* is identical with the above.

*De la Vault*.—This Pear never fruited until this season. We cut the first specimen September 6th, and upon tasting the same we were delighted, proclaiming it equal to the *Bartlett*. Its great similarity caused us to examine the tree minutely; and after tasting another specimen, we came to the unanimous conclusion that it was the *Bartlett*, and nothing else.

*Des Nonnes*.—This fruit we received from the same source, and came to us labelled *Des Nonnes*. We found the name in Mr. LEROY's catalogue, among those of his lowest priced Pears. When he issued his next catalogue it was spelled *Des Nonnes*, and placed in a list of his Pears quoted at double the former price, but still without a description. Mr. LEROY, in his correspondence with us, says, "We have no trees of this kind, at present, in our collection, except one in our school of fruits, which has never, as yet, fruited in our nurseries, and we owe our knowledge of its merits to your notice of it. We pronounce this Pear of the very highest excellence, combining the high flavor of the *Seckel*, with the delicious, melting qualities of the *Belle Lucrative*. Fruit—medium size, regularly turbinate. Skin—smooth, fine, clear, light yellow, covered with numerous small, brown dots. Stalk—from one and a half to two inches long, slender, inserted in a very slight depression. Calyx—small, closed and placed in a small, shallow basin. Flesh—whitish, very juicy, sweet, melting and delicious, with an exquisitely fine rich flavor and perfume. Ripens from the 10th to the last of September. The tree is a luxuriant grower, forming a handsome pyramid on the Quince, and an abundant bearer. The fruit is uniform in both size and appearance.

*Beurre Charron*.—This is another fruit received from ANDRE LEROY, and like the *Des Nonnes*, came unheralded and unknown. The only notice we have had of it is in Mr. LEROY's catalogue, where it is entered under the head of "New species obtained at Angers," but without description, while about twenty others, in the same list, are particularly described. This is quite unlike the *Des Nonnes*, in flavor, but nearly or quite equal to it in quality. Fruit—medium in size. Form—roundish-obovate. Skin—yellowish-green. Stalk—three-fourths of an inch long, set on without depression. Calyx—closed, and placed in a deep, and rather broad basin. Flesh—exceedingly melting, juicy, and perfumed, more like the *Belle Lucrative*, in its highest excellence, in these particulars, than any Pear we know. Ripens about the 10th of October. It grows well on the Quince.

*Doyenne Defais*.—Fruit—above medium. Skin—yellow, with a fine red cheek. Stalk—about one inch, and inserted in a deep cavity. Calyx—open, placed in a deep, narrow basin. Flesh—white, fine-grained, very buttery, melting, rich, high flavored, and delicious. Very desirable indeed. Grows finely on the Quince. Season—middle of October.

*Beurre Biemont*.—Fruit—medium, obovate, greenish-yellow, with a brown cheek. Stalk—quite obliquely inserted, without depression. Calyx—small, closed, and placed in a shallow cavity. Flesh—buttery, melting, juicy, sweet, with a slight and agree-

able perfume. An excellent fruit, and promises well. Ripens from 13th to last of October. Grows well on the Quince.



DOYENNE D'ÉTÉ.

BEURRE CHARRON.

*Beurre Superfin.*—Fruit—large, fine yellow. Stalk—one inch, inserted without depression. Calyx—spreading, in a rather shallow basin. Flesh—yellowish-white, fine grained, buttery, very melting, extremely juicy, with a rich, subacid, vinous flavor Season—October 12th to 20th. A splendid Pear for those who prefer the high vinous characteristic. We fully sustain the opinion of Col. WILDER, and hesitate not to call it a first-rate Pear.

*Vizouziere.*—Fruit—small to medium, round. Skin—smooth and yellow. Stalk—an inch and a half long, slender, and deeply inserted. Calyx—open, and placed in a shallow basin. Flesh—very melting, juicy, sweet, agreeable, but with little or no perfume. Ripens latter part of September. This has fruited with us this season for the first time, and needs further trial. Grows well on Quince.

*Serruriers.*—Medium, greenish-yellow. Stalk—inserted in a moderate depression. Calyx—large and spreading, in a deep cavity. Flesh—coarse-grained, very juicy and melting, with a high, vinous flavor, like *Brown Beurre*, and with a slight bergamot perfume; desirable, and possessing, somewhat, the characteristic of the *Beurre Superfin*. It has fruited this season the first time; needs further trial, but promises well. Grows well on the Quince.

*Beurre Giffart.*—We send you two cuts of *Beurre Giffart*, as they differ much in growth; the one grown in 1852, the other in 1853. They differ, somewhat, from the

cuts in your February number, though would be identified with the outlines of the description there given. Your full impression on frontispiece, as regards form, would be considered the exception with us, as they have grown on our grounds, and the cuts or outlines more of the general form. In addition to your description, we would say, that with us, it is remarkably straggling in its growth.

*Belle de Brissac*.—Of this fruit we send you two cuts; one taken September 14th, 1852, and the other, September 15th, 1853, to show how they differ in form. We



BELLE DE BRISSAC.

described in 1852 as medium, quite round, light yellow. Stalk—about an inch long, and fleshy at the base. Calyx—small and closed. Flesh—white, tender, melting, sweet, not rich or high flavored, but a good second-rate Pear. A specimen cut a few days after this was much richer, and very finely flavored, and might be termed “very good.” Promises well, but needs further trial. You will perceive that this description of form does not exactly suit the cut of 1853. The tree is a fair grower on Quince.

*Beurre Beauchamp*.—Medium, roundish, greenish-yellow. Stalk—an inch and a half long, fleshy at the base. Calyx—open, in a shallow cavity. Flesh—buttery, melting, sweet and agreeable. It promises well. Fruited this season, only. Grows well on the Quince. This, with the five following, were described

by Mr. HANCHETT while the writer was west. (2)

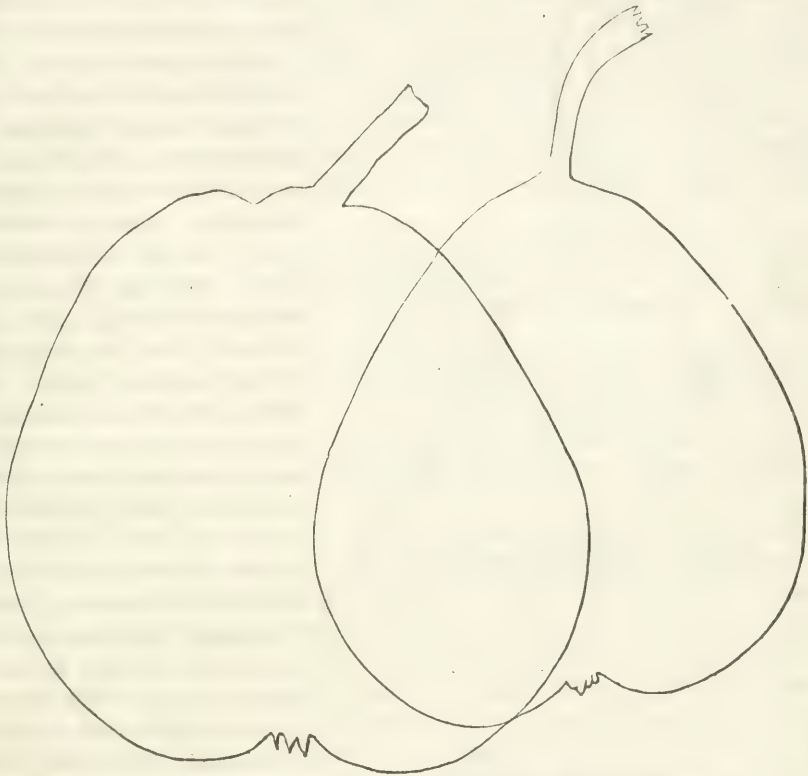
*Passe Tardive*.—Fruit—medium, turbinate. Skin—yellow. Stalk—one inch, in a small cavity. Calyx—open, placed in a shallow basin. Flesh—yellowish-white, buttery and juicy, with a rich, sweet flavor. Grows well on the Quince. (3)

*Sucre Noire d'Ete*.—Fruit—medium, obovate. Skin—yellowish-green. Stalk—an inch long. Calyx—small, closed, and set in a narrow basin. Flesh—juicy, melting, very sweet, and highly perfumed, with the true *Seckel* aroma. Seems inclined to rot at the core, otherwise this would prove one of the most desirable of its season—20th to last of August. Grows well on the Quince.

*Hosenshenk*.—We sent you a specimen of this Pear, which you noticed shortly afterwards, but as it had decayed before you could take a drawing, I send you another. This Pear is emphatically large, and our friend, Mr. GARDER, who sent us the speci-



mens, apologizes for the *unusual small size*, on account of the overbearing of the tree. We hope to have it in bearing on our own grounds this year, or by next, so that we can test it fully here. At present, we look upon it as the best Pear of its season, all things considered. Ripe middle to last of August. A free grower on Pear stock. (4)



HOSENSHENK.

DELICES CHARLES VAN MONS.

*Delices Charles Van Mons.*—Fruit—large, medium, fine lemon yellow, with a thin coating of russet on one side. Stalk—an inch long, set on without depression. Calyx open, in a small basin. Flesh—melting, vinous, juicy, and refreshing, with a peculiar perfume, like the *Kirtland*, which it much resembles in flavor. Ripens from the 20th to the last of September. Grows finely on Quince.

*Chamoisine.*—This Pear has fruited with us three seasons. We find it uniformly large, oblong. Skin—smooth, yellow, with a fine red cheek. Stalk—very short, stout, and fleshy. Calyx—in a small cavity. Flesh—firm, moderately juicy, somewhat perfumed, and pleasant, like the *Bergamot*. It is of surpassing beauty, but only of second-rate quality. Season—September. Makes a fine pyramid on the Quince. (5)

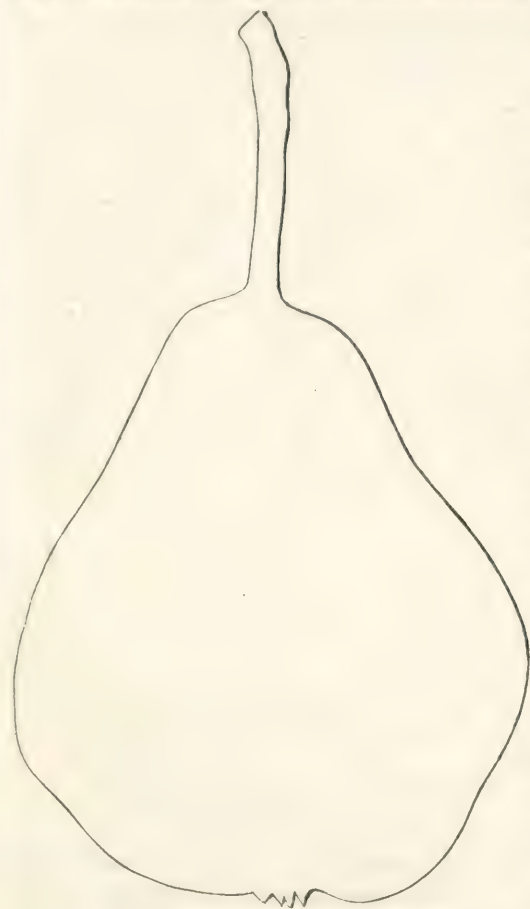
*Fondante de Malines.*—Fruit—large, pyriform. Skin—golden yellow, deepening to orange on one side. Stalk—an inch and a half long, stout, and obliquely inserted.

Calyx—large and spreading, and placed in a very shallow cavity. Flesh—yellowish-white, coarse-grained, buttery, juicy, sweet, rich, and finely flavored, quite like the *Bartlett*; and we feel disposed to call it truly a first-rate Pear. As Col. WILDER states, it will grow in favor, and, no doubt, become one among the selected sorts. Season—with us 20th to last September. Grows well on the Quince.

*Bonne d'Eze*—Is a fine Pear, large, yellow, with a fine blush, melting, sweet, and delicious. It promises well. A beautiful grower, and makes a fine pyramid on the Quince. Season—October.

*St. Michael Archangel*—Is also a very fine Pear, large, handsome, melting, and high flavored. Like the preceding, is a fine grower on Quince. Our specimens having been stolen the present year, we could not say as much as we would desire of these two Pears. Both promise well. Season—October. I send you the cuts, because we have had so many inquiries concerning them.

*Fondante Charneuse*.—I send you two cuts, as they appear to differ in shape. This modern Pear is of medium size, irregular, or one-sided. Skin—pale yellow, slightly tinged with blush. Stalk—an inch long; very obliquely inserted without depression.—Calyx—placed in a deep basin. Flesh—melting, sweet, fine-grained,



ST. MICHAEL ARCHANGEL.

ed, and buttery, with but little perfume. Season—1st to 15th October. It is a good grower on the Quince.

*Doyenne Sieulle*.—This is also a valuable Pear, of modern origin. Fruit—large medium, roundish-oblong. Skin—yellow, with reddish-brown cheek. Flesh—fine-grained, buttery, melting, rich, sweet, and very finely perfumed. Season—October. Grows finely on the Quince. Very desirable. (6)

*Cutinka*.—We send you two cuts, as they differ materially in shape; one the growth of 1852, the other of 1853. Fruit—large medium. Skin—green. Flesh—juicy

melting, sweet, sprightly, and agreeable. Season—last of September. Grows well on the Quince.

*Doyenne d'Alencon*.—Fruit—medium, obovate. Skin—greenish-yellow, with a rich brown cheek. Flesh—coarse-grained, melting, buttery, juicy, sweet, and very agreeable. A fine Pear. Season—middle October. Grows finely on the Quince. (7)

*De Bavay*.—We give you again two cuts of this fruit, differing very materially in form. You will perceive how much they vary from the outlines given by Col. WILDER. Our trees came from Mr. LEROY. Fruit—small to medium, rather pyriform. Skin—yellow, covered with small, brown dots. Stalk— $1\frac{1}{2}$  inches long, obliquely inserted. Calyx—open, set in a deep, broad basin. Flesh—juicy, melting, sweet, and slightly perfumed; very good in quality. Season—with us from 8th to 20th October. Grows well as a dwarf.

*Colmar d'Arenberg*.—Fruit—large, very juicy, flavor something like *Summer Bon-chretien*, rather more tart. Grows well on the Quince.

*Beurre Millet*.—This cut is from a prematurely plucked specimen, and gave every evidence of a first-rate Pear. Good grower on Quince.

*Du Mas*, or *Duc de Bordeaux*.—Fruit—large, pyriform. Skin—yellowish-green, with a reddish-brown cheek. Stalk—one inch, inserted in a shallow cavity. Flesh—buttery, melting, with an abundant, perfumed, refreshing juice. Calyx—very small, placed in a very deep basin. A handsome and desirable Pear. Forms a beautiful pyramid on the Quince.

*Doyenne Robin*.—We send you two cuts, as they vary, somewhat, in form, and differ a little from Col. WILDER'S. Our description gives the length of stem nearly, or quite, two inches, and the flesh as not white, but more approaching a yellowish-white. Very good. Grows finely as a dwarf.

*Triumph de Jodoigne*.—Fruit—very large, obtuse pyriform. Skin—yellowish-green, with a reddish-brown cheek. Stalk—one inch, inserted in an obtuse, uneven cavity, and fleshy at its base. Calyx—small, placed in a deep basin. Flesh—yellowish-white, buttery, melting, with an abundant, slightly perfumed juice, sub-acid and agreeable. Very desirable on account of its splendid size and appearance, and for its very good qualities. It is a beautiful grower on the Quince.

[We have thought it unnecessary to give outlines of such varieties as are already well known, or have been recently figured and described in this journal.

- (1.) This cannot be called a "malady," but merely a defect.
- (2.) This is a synonym of an old, well-known variety—*Bergamotte Cadette*.
- (3.) This is a long keeping cooking Pear, with us. Our specimens are yet hard as bricks.\* Yours cannot be true.

*Belle Alliance*.—We omit description, as you say you have two varieties under that name. Better wait until the matter is cleared up.

- (4.) There is a variety of opinions in regard to the value of this Pear, among those who know it best.

\* This article was intended for publication in the May number, and our notes were written in April.



- (5.) Worthless.  
 (6.) A fine Pear. Keeps well till Christmas, or 1st January.  
 (7.) Your variety cannot be true, as this is a long keeper, of fine quality. Our specimens are yet beautiful. It keeps till May.—ED.]

## QUINCES IN CENTRAL NEW YORK.

BY C. E. GOODRICH, UTICA, N. Y.

TWELVE years ago few people believed that Quinces could be grown in the valley of the Mohawk, although it was known that they were cultivated at Clinton, in the south part of the county. About that time a few trees began to bear fruit, in this city, in gardens having a clay soil, and situated at various elevations above the river,—say from fifteen to seventy feet.

In the spring of 1843, I procured a few trees from Clinton, three or four years old, which I planted in my garden, on the high ground near the Insane Asylum. These I have since increased to some hundreds, by suckers and cuttings, mostly for the purpose of stocks for Pears. Those set for bearing fruit, stand in a light, sandy loam, though a few are in swamp muck, where sand is an ingredient of the soil. A part of those in the sandy loam have a light, sandy sub-soil; but those which have done best have a clay hard-pan sub-soil. These last have suffered least from the effects of winter, and have borne most fruit. They were all set in deep, large holes, filled mostly with good top soil, with which a little lime rubbish was mingled. This last was mostly obtained from the soap factory, and was mixed with leached ashes. Those set upon the hard-pan were upon a moderate slope, falling to the south, but not sufficiently to prevent the holes from becoming a water cup, into which the water actually percolated, in the early spring, when they were dug. Theoretically, I cannot now approve of setting fruit trees in such a position, though practically, it has worked well. The roots, most probably, have always become dry before the weather was warm enough to excite vegetation. If so, the temporary influence of cold water about the roots could not injure them. One of the trees thus situated, whose top you could gather under a five bushel basket, has, again and again, borne three pecks of Quinces, in a single year.

A little manure, widely spread and faithfully dug in the spring, has been found useful. This has usually been coarse, low manure. For the first few years I gave my trees a regular salting in the spring, but have neglected to do so for three or four years. Possibly there is yet an abiding influence of these early applications. I, however, doubt the necessity of its application. During the first two or three years after they began to flower, the petals were all eaten up by a sort of winged ant. I have also lost a few by the borer, as I suppose, although I have not had time to look for him, and have used no precautions against him.

My trees have no protection from the cold west wind, beyond the influence of a distant high fence, and of an occasional Plum tree standing near. On the whole, my

experience justifies the confident hope that, in at least many localities here, the Quince may be rendered fairly profitable.

I may further observe that, although I usually cultivate my trees as single standards, I find they succeed equally well when three or four grow out of the same root, provided, always, the original number is maintained by the careful removal of sprouts every spring. Many gentlemen in our city have been equally successful with myself, so that quite a number of families now raise their own supply of this fruit.

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## THE PEAR BLIGHT.

BY A. H. ERNST, CINCINNATI, OHIO.

THE Pear is now esteemed as one of the indispensable luxuries connected with a suburban or country residence. It is, therefore, not only important that the amateur and the novice should have information on the character and relative value of the fruit, its time of ripening in our climate, that he may select judiciously, but that he should also be somewhat informed on its adaptation to soil, and its cultivation, with the necessary care to protect the tree against the vicissitudes of climate, and the maladies to which it is subject.

The tree is not a native of our country. It is said to be of Europe and Asia, where it lives to great age, and grows to an immense size, with other native trees. In that condition, it is hardly recognizable as the parent of the present luscious and high-flavored fruit, but is small, austere, puckery, and unfit for the palate. It is to the skill of cultivators, that we are indebted for this great change and improvement in its character; and to none so much as to the late VAN MONS, of Belgium. Chance or accident have not been idle in the work of adding many excellent varieties to the list; but the improvement of the fruit has (though not always), been at the expense of the hardiness and durability of the tree. This point has been too much overlooked by propagators; its tenderness being seen, scientific cultivators are giving more attention to correct it in their future additions.

The cultivation of the tree is very simple; it readily adapts itself to any soil or location, so that it be not a swamp or marsh. A deep, rich, clayey loam, with a porous subsoil, and a full exposure to light and air, is the best for its full development. The tendency of the tree is to throw down strong tap-roots; it is, therefore, important to know something of the nourishment it will find to feed on there. This tendency is overcome by growing it on the Quince, the natural disposition of which is to spread its roots, and luxuriate on the surface soil; though the tree is dwarfed, and the duration of its life shortened, still it is better for shallow soils, and gardens where not much room can be afforded. The fine sorts, with few exceptions, succeed well and produce abundantly on the Quince. These are usually trained in pyramid form, branching from the ground up, making a very handsome and attractive object in the border.

When grafted or budded on their own stocks, they require more room, and are usually longer coming into bearing.

The cultivation of the tree has, however, its drawbacks. It is not hardy ; or, if you do not like the term, it is subject to be cut off and destroyed by death at any time, when seeming in full vigor of health and growth. On the cause, there has been much speculation, without seeming to come to any satisfactory conclusion.

Long experience, observation, and much reflection, have established in my own mind the cause. I do not know that I can make this clear or satisfactory to you, and other minds, but I may open a door to a new, or rather an unexplored field for thought and reflection, both to the practical and the scientific investigator. Perhaps there is no spot in this, or any other country, where a greater opportunity has been afforded for an observance of the diseases to which the Pear tree is subject—especially that form which we understand as *fire blight*—than here.

Scientific gentlemen, with some exceptions, have generally followed each other in attributing it mainly to INSECTS, and some to an *exhaustion*, or *absorption* of those particles from the soil which are *essential* to the *health* and *life* of the tree, and the *perfect development* of its *fruit*, admitting, at the same time, the existence of other extraordinary causes for its disease and death.

Without denying that insects are sometimes injurious to the Pear tree, even to its destruction, I must be permitted to question the general correctness of the theory, and also that of an exhausted soil. To my mind, facts do not warrant such conclusions, as applicable to our region. To make out the latter theory, it should not be left to rest on doubtful speculation, but it should be shown to harmonize with matters of practical fact, as they continually occur. The ingenuous mind never should allow itself to lose sight of these.

Though, unquestionably, the working, or grafting on bad stocks, such as *suckers*, and planting in *bad soil*, will facilitate the destruction of the Pear tree—as the same cause would any other—they are only *local*, and *lay* not at the *root* of the *evil*. To suppose the adventitious existence of some substance in the soil, to remove difficulties out of the way of a favorite theory, is not satisfactory.

It has been advanced that the cracking of the *White Doyenne* is owing to an exhaustion from the soil of those particles necessary to its perfect development ; that the tree would resume its former habit of the production of perfect fruit, if these substances were supplied to the roots. Among many reasons for dissenting from this position, let me say, that for eight or ten years, I have hardly had a perfect fruit on trees of this variety, many of which formerly bore fine fruit, until last summer, when, on all of them, it was as fine as I ever saw it any where ; and this without any application whatever to their roots. The trees are scattered over my grounds ; some in grass, the sod of which has not been disturbed for years. I attributed this remarkable effect to atmospheric influences—with which the composition of the soil had nothing to do. It was, during the growth of the fruit, unusually dry for our climate.

Let us now examine the analysis of the Pear tree, as a correct and reliable basis to overcome the malady to which the tree is subject. LONDON, and other eminent writers



on the subject, would have us to understand that there is a strong analogy in the life principle of plants and animals. It is, therefore, fairly inferable that, as animals of the same species do not wholly depend on one class of food for life and health, but that, to a certain extent, choice is left to select from, producing the same results, that this is equally applicable to plants. When we, therefore, have the analysis of Prof. EMMONS before us, showing that the ash of the sap-wood of the Pear tree contains more than twenty-seven per cent. of phosphate of lime, twenty-two of potash, and a number of other inorganic elements, though perfectly correct, are we sure that a tree grown in a different soil will not produce different results? I shall show that this is the case in other species of trees, and therefore infer it is so with the Pear. It is very certain that the color of fruits is affected by substances in the soil and taken up by the roots, not essential or detrimental to the health of the tree.

LIEBIG, in speaking of the inorganic constituents of plants, says: "Many of the inorganic constituents vary according to the soil in which the plant grows," &c. Again: "Most plants, perhaps all of them, contain organic acids of very different composition and properties, all of which are in combination with bases, such as potash, soda, lime, or magnesia," &c.; and after proceeding to show that certain acids are always, of necessity, present in plants, he proceeds: "It is equally certain that some alkaline base is also indispensable in order to enter into combination with the acids." And, while he seems to make it clear that the life and health of the plant depends invariably on certain acids, he says: "It will be necessary to bear in mind that any one of the alkaline bases may be substituted for another, the action of all being the same." His object is, if I understand him, to prove that certain acids are in the first place essential to the existence of the plant, and that this always attracts a given quantity of alkaline; that these alkalines are not necessarily the same, but similar in action; that the plant will take them up as they are found in the soil. To prove this, he says: "It has been distinctly shown, by the analysis of D'SAUSSURE and BERTHIER, that the nature of a soil exercises a decided influence on the quantity of the different metallic oxyds contained in the plants which grew on it; that magnesia, for example, was contained in the ash of a Pine tree grown at Mont Brever, while it was absent from the ash of a tree of the same species from Mont La Salle; and that the proportions of lime and potash were also very different." Again he adds: "Let us now compare BERTHIER'S analysis of the ash of two Fir trees, one of which grew in Norway, and the other in Allerard, (departemens de l'Isere.) One contained fifty, the other twenty-five per cent. of soluble salts. A greater difference in the proportion of the alkaline bases could scarcely exist between two totally different plants."

Though it seems in all cases the oxygen was found nearly in the same quantities in each species, proving conclusively that while certain properties, such as some of the acids and oxygen, are always present in nearly uniform proportions, that it is not so with other substances; that they not only vary largely in quantity, but in some instances are altogether absent; that a tree, like an animal, has some latitude of choice in its food; and that the elements of the air are essential to the existence of both. This is perfectly in harmony with every day's experience of the different and diverse

soils we find the tree to grow and flourish in. It may be questioned, if a tree, which finds the proper constituent particles in a soil for its healthy growth, can ever exhaust any part of it to such an extent as to produce death, if the natural sources of growth continue to yield their supply from the atmosphere. A forest does not wear out the soil and die; on the contrary, we are indebted to its agency for the virgin soil we find under its boughs. It is the opinion of writers of high authority, that among our modern forest trees, there are some which have attained the great age of four thousand years; and it is said that "investigation of coal and lignite strata has proved the existence of trees of the same order as those now existing." If this be true, it proves positively that trees do not draw on the soil, so as to destroy themselves, or to impair the perfect development of their seed and fruit. But it may be said this is applicable to a state of nature. Well, this is just what I am endeavoring to show; that we have run contrary to this; and, from that cause, have produced an enfeebled race, which we are exposing to an uncongenial climate, and charging it (improperly, as I think), to the soil.

The reason why soils are worn out, is because of injudicious cultivation, a continued removal of its products without a proper restoration of the properties thus removed. This is not applicable to trees, only so far as the removal of fruit is concerned, and the obstruction of the natural supply from decayed leaves, branches, &c. This may be larger or smaller, and of course it is wise to see that the soil is well supplied with all the particles thus drawn from it. You may, however, feed the Pear tree as much as you please, and still it will die in the midst of a luxurient growth; and it is, therefore, to other causes that we must look for its destruction, not to the want of proper food.

The advocates of the insect theory have not been very successful in proving its truth. They are bound to show something more plausible for its support, than the simple fact that insects are found in connection with the diseased parts. They are bound to show that these insects are really the cause, and not there as a result of the blight. And, moreover, to show some reason why it is that they *discriminate*, pass by certain unmolested Pear trees, and do not make a clean sweep of all within their reach; and also, why it is that their destructive influence is sometimes suspended for years together.

Prof. HARRIS' description of the *Scolytus pyri*, in his invaluable work on Insects, which is mainly relied on as the support of this theory, fully defines its regular periods of change and operations. I am very sure that it will not apply to our blight, all the reasons for which I cannot here enumerate. Suffice it to say, that the injury of that insect "ends with the death of the branch, down to a certain point, but does not extend below the seat of attack, and does not effect the health of other parts of the tree." (Second edition *Harris' Treatise on Insects*). A comparatively harmless insect, whose effects all cultivators in this region will have observed on their trees.

I will here very briefly give what I deem the cause and the reason for the blight, which are not materially different from those given elsewhere. Long observation has confirmed my judgment that the disease is chargeable mainly to atmospheric influ-

ences. The Great Creator has in his wisdom so ordered it, that the vegetation, soil, and climate of every part of the globe act in perfect harmony, for the best development of the former. A departure from this state of nature is at the hazard of the health and longevity of the plant or tree, though this result does not invariably follow. The Pear tree, as before observed, is not a native of this continent, but of a different hemisphere, where it grows to large size and great age, as other forest trees do. All intelligent writers, so far as I know, are agreed that the improvement of the fruit has generally been at the expense of the hardiness and durability of the tree, (not a necessary consequence). However, we find it so. We have imported an enfeebled race, and are exposing it to a new climate, the vicissitudes of which it is not fully capable of resisting. I care not for terms: whether you call it *frozen sap blight*, or *sun blight*; whether the effect is produced by sudden and rapid changes of winter temperature, or an excessive summer sun. In either case, it is the destruction of the natural functions of the tree, producing disease and death. The former is often tardy in its work, but the latter generally rapid and instantaneous. In the one case, it is brought to bear on the tree in a state of rest, when the sap-vessels are contracted, when their juices have been expended to form wood, which is immaturity ripened. In the other case, when the sap-vessels are extended to their utmost capacity, to supply the demands of a rapid and luxuriant growth; when this growth is in its most tender and delicate condition, the scorching mid-day sun does the mischief; the sap, by its rays, is scalded and vitiated, a chemical process of decomposition takes place, its poison is soon carried to and mixed with other portions of the tree, and the whole is often irretrievably lost in a few hours. The only remedy is, the moment that it is discovered on the limb, where this form of blight always makes its appearance, to lop off until you come to the sound and healthy wood, and thus prevent its spreading. Do not stop to hunt insects, until you have performed this work, when you can do so leisurely.

*Sun blight*, or *fire blight*, is always most prevalent in a wet and hot summer. There has been but little the last three years, and we shall certainly have no frozen sap blight to complain of next summer. This is to be attributed to rather unusual dry summers during this period; the wood having ripened well before winter set in, and the growth not so luxuriant as in wet seasons.

As a remedy, or rather a preventive to the frozen sap blight, I would suggest the shortening-in application, in September or October, to check the growth, and induce the maturing of the wood. This system is, perhaps, only applicable to dwarfs, as standards cannot well be reached. What is understood by shortening-in, is to cut back the present year's new shoots to the firm wood, say one-third or one-half of it, as the case may require, so that the sap remaining shall be expended in perfecting the wood which is left, and not to be stimulated by the leaves on the ends of the shoots to continue growth. This system is also practiced to force the tree into forming fruit spurs, and thus facilitate the production of fruit. Care must be observed in the time of performing this operation. It must not be so early in the season as to cause the bursting of the lateral buds, and thereby cause a more injurious growth than it is attempted to check. There need be very little risk in this; we must be governed by



the state of the season. It is better a little late, than too early; when the majority of the leaves on the shoot are rigid and hard, is a suitable indication of the proper time.

Having said so much about the want of hardiness of the tree, it may be asked, how I account for the trees that are to be found up and down our land, which have withstood the winter's storms and summer's heat from one to two hundred years? Before I answer the question, allow me to offer them as standing monuments against the exhaustion and insect theories. We have had some specimens in this vicinity—until the spirit of city improvements required their room, when the rude hand of the woodman brought them low—whose existence was co-equal with the first impress of civilization; they remained sound, healthy, and fruitful to the last. Such specimens, it will be found, have all originated from seed, and always from a hardier stock than the varieties of more modern introduction. A friend has just given me the history of one in Guilford, Conn., which he says is over two hundred years old, measuring fifteen feet in circumference at five or six feet from the ground. It is now beginning to decay, but yields a considerable quantity of fruit. He says the fruit does not compare with the best now in cultivation, but when he was a boy, more than fifty years ago, it was considered very superior.

It is to these hardy remains of ancient days, we must look for constitutions to hybridize with our finer sorts, say, if you please, the *Seckel*, which is as hardy as any of them, for a class of trees producing superior fruit, and, at the same time, such as we can trust out of doors.

I fear the above remarks may seem lengthy to some, but the subject is of too much interest to be passed over lightly, or with mere assertions. As it is investigated, the more fully its importance is brought to view. I have endeavored to avoid all improper allusions, unnecessary repetitions, and aim at display; simply confining myself to a plain statement of theories and opinions of others, their comparisons and plausibilities. Much might be added to sustain the views I have presented as the real cause of destruction of our Pear trees.

[The above paper was communicated by Mr. ERNST to the Cincinnati Horticultural Society, and subsequently appeared in the *Horticultural Review*. Mr. ERNST suggested that we would give place to it in this journal, which we now do with pleasure. It will well repay a careful perusal by every one engaged in the cultivation of the Pear. The disease which is the subject of remark, is a most mysterious one indeed; no less so than some of those fearful epidemics that make such deadly periodical attacks on the human species, and then disappear. The most watchful and skilful cultivators, and those who have had the most ample opportunities for observation, have been unable to do more than suspect or guess at the cause. Mr. ERNST's paper, unfortunately, able and careful as it is, throws no new light on it. From the beginning, many have held strongly to the opinion that "*it was chargeable, mainly, to atmospheric influences,*" and as far as we are aware this is the opinion of a large majority now.\* Our own opinions are hardly worth giving, and at any rate the length of Mr. ERNST's article prevents us from giving them at this time.—ED.]

## KIRRI COTTAGE.

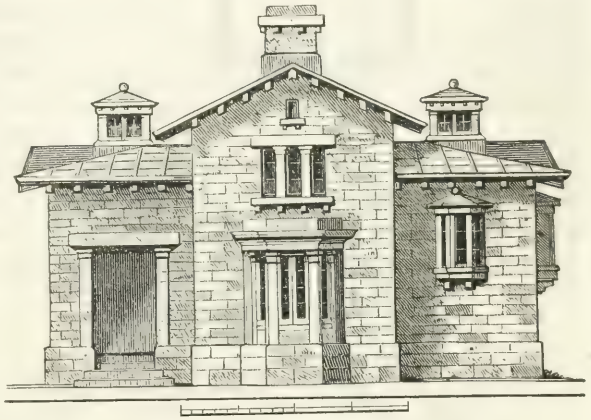
SUBURBAN RESIDENCE OF MRS. CORNELIUS DAVIS, SENIOR, AT NEWARK, NEW JERSEY.

BY A. J. DAVIS, ARCHITECT, N. Y.

THE name is derived from the Japan tree, standing in the front ground; English name, *Pawlonia*. This tree, if not the most graceful in its form, is the fastest growing, most exotic looking, and the richest in its flower, of any in our latitude. It was planted in 1849, five feet high, without a branch, and now overtops the house.

A somewhat improved version of the building executed is given in the frontispiece, and has been studied by the architect with much care. It is offered as a practicable gothic cottage, cost not to exceed the sum of four thousand dollars, substantially built with brick, and stuccoed as

at New Haven. We also give here an Italian version of the Kirri Cottage, which being in the ordinary style of building, would be more readily executed than the gothic, and at less expense. The plan would be much the same in both. The lot is 53 feet upon the street, and the house retires some 20 in its porch of entry. The grounds, in front, are filled with trees and shrubs, a catalogue of which is



ITALIAN VERSION OF KIRRI COTTAGE.

given,\* in order that the same might be arranged upon an enlarged surface, with increased effect. These trees and shrubs were had of Mr. DOWNING, and comprise many of those in esteem by him, as rare and beautiful. Others were from HARVEY, Newark, and are all thriving in the grounds.

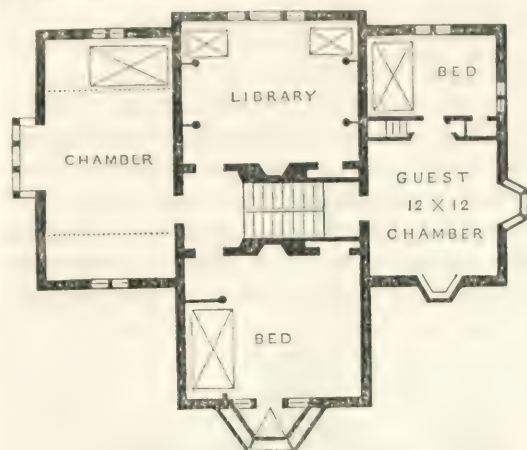
THE HOUSE.—A walk, flagged with Saugerties stone, leads through the shrubbery, to a porch of entry, open upon two sides, trimmed with gothic columns, under a pointed

\* See Frontispiece. EXPLANATION. — A, Austrian, or Black, and White Pine. B, Boccia and Althea. C, Chinese Evergreen Honeysuckle. D, *Tecoma grandiflora*. E, Exmouth Elm—a beautiful variety. G, Ginko, of Japan. H, Hemlock. K, Kentucky Coffee-tree; *Gymnocladus*. M, English field Maple. O, Osage Orange. P, *Pawlonia imperialis*; Keri, or Kirri, of Japan. T, Tree Paony and Mezereon. V, Vines and Creepers. W, Ringlet Willow. X, Chinese Wistaria. Y, Himalaya Viburnum. Magnolias, Tulip tree, Willows, White and Black Spruce, Balsam Fir, Chinese and American Arbor Vita, Mountain Ash, Silver-leaf Abele, Carolina Syringa, Tree Honeysuckle, African and Double Altheas, Strawberry Tree, Hercules Club, Persian Lilac, Scarlet Maple, Horse Chestnut, Acacia, Yucca gloriosa, Climbing Roses, Sweet-scented Clematis, English Ivy, American Ivy, Commelina, Holly-hock, Garland Deutzia, Periwinkle, Moneywort.

Of annuals, or greenhouse plants, the cottage is decorated by the *Cobea scandens*, *Leptospermum*, *Maurandias*, *Salvias*, *Tanyeh*, *Madeira*, and *Cypress* vines. To which may be added the following hardy plants not successfully reared—*Aristolochia*, *Periploca*, *Fumatory* vine, *Mahonia* Holly, Japan Quince, Scotch Perpetual Rose, Oak-leaved *Hydrangea*, *Cypress*, *Larch*, Sweet-scented Shrub.



arch of four centers, with trefoil spandrels, splayed jambs, and hood mold. The principal floor is elevated four feet above the street.



GROUND PLAN.

front, and the station for a furnace would be under the right wing. This wing, not yet completed, will contain the rooms marked: the library, or office, and bath-room, half-way down the stairs, from the principal floor, yet on a level with the grounds in front. The guest-chamber, with oriel windows, and bed-room, half-way up, entered from a

landing on the stairs.



VIEW OF FRONT BED-ROOM.

Basement.—The rear portion is entirely out of ground, so that the kitchen, under the dining-room, and side store-rooms, are light and dry. The cellars are in

The second story contains the present library, over the dining-room, a chamber in front, with one large, or two small bed-rooms in the left wing. The chimney flues are brought together over an arch, and rise in one stack. Our view represents this stack, topped out with insulated shafts of brick, or terra cotta, linked

together at top and bottom, and they may be ornamented upon their surface.



The parlor ceiling has the joisting, and plank, supporting the deafening, chamfered and planed to show, instead of plastering. The walls are painted fawn color, in oil, and the doors are imitation of black walnut.

The dining-room ceiling is plastered, and painted a lilac tint, with kalsomine, and the walls are papered, a light figure, upon a darker (chocolate), ground. Doors—imitation of mahogany.

The hall and stairway are painted grey stone color, in oil; the steps oiled and varnished, to bring out the grain.

The porch is fresco painted, and coursed off in imitation of free stone.

The library, or study, above, has the rafters, purlins, and plate, dressed to show to the peak. The intervals between the timbers are lined with canyass, and papered, white figure on a blue ground. Four of the rafters descend to the floor, forming alcoves, of depth sufficient for large books above, and shelves for papers below, covered with curtains, moving by rings over iron rods.

The front bed-room rises, also, into the roof, but is plastered between the beams, and painted in oil, a view of which is given. I prepared a view of this room at the solicitation of Mr. DOWNING, which may be found at page 385 of "*Downing's Country Houses*."



## Foreign Notices.

**ACACIAS.**—Of the whole class of New Holland plants, few are more interesting than *Acacias*. The strange variety in the phyllodes or leaves, the profusion and fragrance of their blossoms, and the season of the year when they are in the greatest perfection, render them eminently worthy of cultivation. My object, therefore, in the following remarks is to bring, if possible, this interesting tribe of plants more into notice than ever it yet has been; and with that view, I have sketched or drawn out the more prominent characters of a collection of twenty-five, well adapted for the conservatory border, shelves, or the greenhouse stage; but before I commence my enumeration, permit me to offer a few words common to the generality of those I intend bringing under notice:—First, I have to state that the whole of these *Acacias* are natives of various parts of New Holland; therefore enjoying a brisk growing climate through the spring months, and a dry atmosphere during summer. And thus we are furnished with two leading points whereon to base the successful cultivation of this genus; these are, to maintain such a condition of climate as will insure a quick growth, and when once that is obtained, nothing is better for ripening it than an exposure to bright sunlight, with a free circulation of air at all times. Second, *Acacias* generally seed well; and thus propagation is rendered easy, as the seeds germinate freely, either when sown as soon as they are ripe, or kept back until the ensuing spring. In the latter case, they must be soaked in hot water. I have, however, seen seeds which have fallen from *cyano-phylla* and other species spring up as plentifully as Sycamore. Another mode of propagation is by means of cuttings placed in sharp sand, and the pots placed on a warm greenhouse shelf for a month or six weeks, and then introduced into a growing temperature of about 70°, taking care to have the cuttings covered with bell-glasses, until roots have been freely emitted; afterwards, pot off singly, and place them again in the same situation, until they have got well established, when nothing more is needed than ordinary attention. The soil most suitable for the *Acacia* is three-quarters good turfy loam, with the remainder made up of peat and sharp sand. Another point, which I think is not generally known, is that the generality of them, although very gummy, stand the knife well, without appearing to suffer from its effects; at least, with some species, its application is absolutely necessary, in order to form good specimens, and keep them within bounds.

*A. armata*.—This is a valuable species, not only on account of the late period at which it flowers, but likewise on account of its large bright yellow flowers, which are produced in profusion, in globular heads, situated on a peduncle one inch in length. This kind is best adapted for pots.

*A. alata*.—In this the stem and phyllodes are all flattened, and every secondary branch is connected with the midrib of the primary one. The phyllodes are so connected as to assume the form of one long narrow phyllode, thickly beset with hairs, and furnished with short spines at intervals on each side. The flowers are all attached in pairs to the midrib of the primary phyllode, and diverging alternately right and left on each side, to the number of about 30, on a phyllode of about four inches long. Peduncle about three-tenths of an inch in length; flower heads globular, pale yellow. This forms a straggling bush, requiring to be upheld with stakes. It is most suitable for conservatory borders.

*A. biflora*.—This is a delicate but pretty species, and well worth cultivating. Phyllodes triangular, sharp spined, much resembling an *Apaeris*, 1-5th inch long. Peduncles about the same length, bearing two very small white flowers. This plant must be kept in a pot, and clear of other plants, and it will require stopping to make it bushy, otherwise it will soon become weak and straggling.

*A. cochlearis* is neat and compact, and well adapted for large pots and the margins of conservatory borders. Height, six feet. Phyllodes two inches long, linear, pointed, but not stiff, rather hoary. Flower heads globular, small, produced in pairs, from the axis of the phyllodes. Peduncles two-fifths of an inch long. This is a plant of rather slow growth, and it requires no pruning.

*A. celsastrifolia* will flower well, even in small pots, but in 13-inch ones it forms a huge bush, loaded so completely with flowers as hardly to render either phyllodes or pot perceptible. Phyllodes about three inches long, and  $1\frac{1}{4}$  inch wide; branches forming, as it were, a very long panicle, from thirty inches to three feet long; flowers whitish, sweet scented. This species is very subject to scale, the best way of clearing which off is to cut it well in after flowering, and not to be sparing of soft soap and water; or, best of all, use Dominy's mixture.

*A. cyanophylla*.—This forms a splendid object for the center of a lofty conservatory, growing as it does to a great height, and producing large loose panicles of exquisitely bright yellow flowers, which are large and highly scented. Phyllodes ten inches long, and  $1\frac{1}{4}$  inch or  $1\frac{1}{2}$  inch in diameter, very wavy, unequal sided. This plant, like *celsastrifolia*, requires a periodical cleaning; it also stands pruning well, and it is much improved by it. No one in possession of a large conservatory should be without this desirable species.

*A. cygnorum* has rather a pendulous habit, its branches being very slender and almost covered with small pinnated leaves, which are composed of three pairs of leaflets, and it is also studded with sharp spines; leaflets 1-6th inch long. Flowers much like *rotundifolia*, but smaller. This is certainly an excellent *Acacia* where variety is wanted, and it is admirably adapted for pots.

*A. Drummondii*.—What is there to be desired in an *Acacia* that is not to be found in this? Its habit, which is at once neat and compact, and its flowers, which are conspicuous and produced in profusion, at once place it in the first rank. Its leaves are bipinnate, about an inch in length, formed of three pairs of leaflets, from three-quarters to one inch long, composed of three pairs of pinnules, which are of an oblong shape, 3-10th inch long; and the petiole of both the primary leaves and leaflets is slightly extended. Flower heads oblong, about an inch long, placed on a peduncle, about the same length, produced singly. Every one who only has room enough for one *Acacia* should endeavor to obtain this one. The best place for it is the conservatory shelf.

*A. dependens*.—This is adapted for conservatory borders or large pots. It is of an upright growth, of a very dark color, and has linear phyllodes an inch in length. Spikes of flowers  $1\frac{1}{4}$  inch long, of a light yellow color, and not particularly conspicuous. This is a species that can be kept to any shape by means of the knife.

*A. diffusa* is suitable for pots, but it is loose in character, and requires the use of ligatures to make it assume a nice shape. It makes shoots about one foot long in a year, and furnishes them for about nine inches in length with flowers, which are produced in pairs from a single phyllode, or in fours, fives, or sixes, when a pair or three phyllodes occur close together. Peduncle about 2-5th inch in length; phyllodes linear, one inch in length; margins of the phyllodes running into a sharp point at the apex. Well worth cultivation.

*A. grandis*.—This is one of the neatest and best of the genus for pot culture, forming as it does, by simply stopping it, either a dense bush, or, with a little more attention, a fine pyramidal specimen; grown in the latter form it is certainly extremely ornamental, either on a greenhouse shelf or the margin of a conservatory border. Its leaves are pinnated, about 3-5th inch in length, formed of eight pairs of leaflets, about  $\frac{1}{2}$  inch long; flowers globular, produced from the axil of each leaf, either singly or in pairs; peduncle  $\frac{1}{2}$  inch in length. This is a plant that deserves to be in every collection.

*A. isophylla* is not one of the best, but its earliness renders it worthy of cultivation. It is well suited for pot culture, making a very pretty bush under ordinary attention. Its phyllodes are linear, about  $1\frac{1}{2}$  inch long; flowers small, globular, produced singly from the axis of the phyllodes. Peduncles 3-5th inch in length.

*A. lineata* in all its stages makes a fine pot plant, but being of rather weak growth the use of sticks and ligatures is necessary in order to form a nice specimen. A strong plant under ordinary



circumstances will make shoots in one year from twenty inches to two feet, producing flowers during their entire length, with the exception of an inch or two at the base. Flowers in pairs at the base of each phyllode; peduncles 1-5th inch long; flower-heads globular, small, of a bright orange yellow; phyllodes 2-5th inch long, linear, with the upper margin rounded at the apex and forming a point. One of the earliest and best of the *Acacias*.

*A. longiflora major*.—This is a neat kind for a small conservatory border; for when in blossom its bright yellow oblong flower-heads render it a most conspicuous object. Phyllodes linear-lanceolate, four inches long, and 2-5th inch across at the widest part; flower-heads about 1½ inch long, sessile, in pairs, diverging right and left from the axils of the phyllodes, and produced for about eight inches along the branches. Habit upright, thin of branches, and inclined to become straggling when well flowered. This is a splendid *Acacia*, but being difficult to propagate there are but few plants of it in the country.

*A. lophantha* is best suited for the border of a large conservatory, where it is much esteemed, not for the sake of the flowers, (for they are produced but sparingly) but for its fine spreading foliage, consisting of leaves nine inches long and five inches wide, formed of ten pairs of leaflets, and each leaflet composed of from fourteen to twenty pairs of pinnules. Pinnules half an inch in length, and one-eighth inch wide; flower heads solitary, of an oblong shape, from 1½ inch to two inches long, and of a light color; peduncle about three inches long. The knife must not be used for this plant.

*A. mucronata*.—This species is well adapted for conservatory borders; its phyllodes are two inches long, being twice the length of those of *pendulans*; but in all other respects they are similar.

*A. nigricans* has much the appearance of *grandis*, but close inspection will at once show the difference, for instead of eight pairs of leaflets constituting a leaf, there is but one pair in this species. Leaves bipinnate; leaflets formed of five pairs of pinnules, which are one-sixth of an inch long; flower heads globular, produced in pairs from the axis of the leaves; peduncle half an inch long. A very good plant for a pot, but better adapted for the margin of a conservatory border.

*A. pubescens*.—This is a neat plant for a pot or small conservatory border, being rather delicate and much inclined to assume the umbrella shape. Stem pubescent. Leaves bipinnate, about 1½ inch long, primary leaflets about 3-5ths inch long, of which eight pairs constitute the leaf. Leaflets formed of twelve pairs of pinnules of about 1-10th inch long; racemes produced singly from the axis of the leaves, about three inches long; flowers globular, small, yellow. A rather slow growing species, which will not stand pruning.

*A. pulchella* is best adapted for the margin of conservatory borders, or for the center of a circular bed which is to be filled with dwarf plants; for by means of the knife you have free control over its shape and habit; its height is from six to seven feet, and it forms as dense and compact a bush as any plant with which I am acquainted. Leaves about 1-5th inch long, formed of four pairs of leaflets, which are 1-10th inch each in length. Flowers globular, small yellow, produced singly, and furnished with a spine on each side of its base. Peduncle 2-5th inch long. For a low bush, in a conservatory border, this stands almost unequalled.

*A. pentadenia* is another fine *Acacia*, well adapted for pot culture. Branches erect; and altho' making a nice compact bush, it does not become too dense, but is of a nice slender and open character. Leaves bipinnate, composed of two pairs of leaflets, the lower composed of seven pairs of pinnules, and in length about half as long as the upper ones, which are composed of twelve pairs of pinnules. Flower heads globular, produced in twos, threes, fours, or fives, from the axis of the leaves. Peduncle one-half of an inch in length. A nice plant for a greenhouse stage.

*A. promorsa*.—This has a rather straggling habit, but it is well adapted either for pots or borders, and certainly makes handsome plants when about three feet high, though it will require skillful management in training to prevent its becoming unsightly from the loss of its lower phyllodes. The latter are triangular, one-third inch long. The branches grow about one foot or

fifteen inches in the course of a year, and are covered with flowers from the apex to the commencement of the season's growth. Peduncle  $\frac{1}{2}$  inch long; but its phyllodes are almost hid by its profusion of flowers. Altogether a pretty plant.

*A. paradoxa*, although of straggling growth, is suitable for pot culture, standing the knife well; phyllodes one-half inch in length, very wavy, unequal sided; situated very closely together along the stem, furnished with two sharp spines at the base of each, rendering the plant very prickly by their stiffening as they grow old. Flowers globular, of a bright yellow, produced very plentifully. Peduncles the same length as the phyllodes.

*A. ricciana*—This forms a magnificent plant for a large conservatory, towering to the height of some twenty-five feet, and producing long pendulous branches hung their whole length, as it were, with numberless bunches of flowers. The latter are sessile, arranged upon a peduncle of from  $2\frac{1}{2}$  to 3 inches long. The phyllodes are 3-5ths inch long—linear, stiff, and nearly as sharp as needles when they get old. This plant is capable of being trained into whatever shape you may require it. It also bears the knife extremely well, and is a most abundant flowerer.

*A. rotundiflora* forms a loose spreading shrub, of about three feet high, and as much in diameter; it is most suitable for pots. Phyllodes one-half inch in length, somewhat rotundate, rather pubescent, and deep green; flowers globular, bright orange yellow, solitary, sometimes in racemes of two to four heads; peduncle  $\frac{3}{4}$  inch long. This is by no means a plant of fine habit when allowed to assume its wild form; but with judicious pruning, and by training tastefully upon a balloon-shaped trellis, allowing the shoots to hang gracefully from the top, its appearance is greatly improved, and when in flower it forms a worthy inmate of our greenhouses.

*A. verticillata*.—This is one of the most interesting, and, at the same time, most beautiful and conspicuous, of Acacias, and well worthy of a prominent position either on the greenhouse stage, conservatory shelves, or in the borders, where its graceful habit must render it a favorite. Its phyllodes, as its name implies, are arranged in a verticillate manner, although in broken whorls of about 1-5th inch apart; the phyllodes are about 3-10ths inch in length, linear, stiff, and very sharp pointed. Its flower heads are about an inch in length, of an oblong shape, and seated upon a peduncle of about 3-10ths inch long; in some cases they appear singly, in others four or five flower heads are so arranged as to appear verticillate. Nothing is better than to allow this species to take its own natural habit, for the use of the knife or ligatures would not improve it.

The following alphabetical list will show at a glance the time of flowering, form of flower, &c., of the various sorts just described:

Name.	Time of Flowering	Form of Flower Heads.	Size, &c.
<i>Acacia armata</i> .....	Late	Globular	Large
" <i>alata</i> .....	Late	Globular	Middle
" <i>biflora</i> .....	Early	Globular	Small
" <i>cochlearis</i> .....	Middle	Globular	Middle
" <i>cestrifolia</i> .....	Early	Panicled, globular	Middle
" <i>cynorum</i> .....	Middle	Globular	Small
" <i>cyanophylla</i> .....	Middle	Panicled, globular	Large
" <i>Drummondii</i> .....	Middle	Oblong	Large
" <i>dependens</i> .....	Middle	Panicled, oblong	Small
" <i>diffusa</i> .....	Middle	Globular	Middle
" <i>grandis</i> .....	Late	Globular	Large
" <i>ixiophylla</i> .....	Early	Globular	Middle
" <i>lineata</i> .....	Early	Globular	Middle
" <i>longiflora major</i> .....	Middle	Oblong	Large
" <i>lophantha</i> .....	Early	Oblong	Large
" <i>muconata</i> .....	Middle	Spiked, globular	Small
" <i>nigricans</i> .....	Late	Globular	Large
" <i>pubescens</i> .....	Middle	Globular	Small
" <i>pulchella</i> .....	Late	Globular	Small
" <i>pentadenia</i> .....	Late	Globular	Middle
" <i>præmorsa</i> .....	Middle	Globular	Large
" <i>paradoxa</i> .....	Middle	Globular	Small
" <i>Ricciana</i> .....	Early	Spiked, globular	Large
" <i>rotundifolia</i> .....	Early	Spiked, globular	Large
" <i>verticillata</i> .....	Early	Oblong	Large



THE SALISBURIA, OR GINKO TREE.—We find the following notice of this beautiful tree in a late number of the *Gardeners' Chronicle*. It is perfectly at home in the climate of Rochester:—

"In the scramble after novelties there is a risk that one of the most valuable of the exotic Coniferous trees grown in Europe may be forgotten. It would be interesting to know what proportion the sale of the Ginko Tree, or *Salisburia aliuntifolia*, bears to that of such plants as *Taxodium sempervirens*. We suspect that the demand for it is almost nothing, judging from the very few places in which it was ever seen. And yet it is a noble tree, of singular as well as beautiful aspect, as hardy as a Poplar, and, when old, of gigantic stature. Its only fault is being deciduous. Here and there large trees may be met with, looking in mid-winter like vigorous Pear trees. But to growers in general the plant is scarcely known.

An interesting account of the tree as it now exists near Montpellier, for which we are indebted to M. CHARLES MARTINS, has drawn attention once more to the peculiarities of *Salisburia*, and we hasten to avail ourselves of some of his facts.

In Japan, of which it is a native, as well as of some of the coldest parts of China, it is looked upon as a kind of Walnut, and acquires very considerable dimensions. A specimen, growing by a Pagoda in the neighborhood of Peking, is recorded by the Russian traveler Bunge to measure thirteen yards in circumference, and to have a prodigious stature. In the Botanic Garden of Pisa is one about twenty-five yards high, and a yard in diameter at its base; and near Montpellier grows another, of which the following is the history, abridged from M. MARTINS report.

In the year 1788 BROUSSONET, who was then in London, sent to Prof. GOUAN, of Montpellier, a plant of this species, for which he was indebted to Sir JOSEPH BANKS. In 1812, twenty-four years after being planted, the tree flowered. At that time it was nine and a half yards high. In June, 1835, it was rather more than seventeen and a half yards high. On the 7th December, 1853, its stature was determined by careful measurement to be nineteen and three-quarter yards, or a trifle more. From this it appears that it lengthened on an average not quite a foot annually; but it in reality grew nearly three times as fast in the first forty-seven years as in the last eighteen.

The spread of the branches was rather more than seven and three-quarter yards in 1812, 11½ in 1835, and 14½ in 1853.

The diameter just above the roots increased at the following rate:—In 1788 it was 3 millimetres (1 year old); in 1812 it was 239 millimetres (29 years old); in 1835 it was 605 millimetres (47 years old); in 1853 it was 887 millimetres (65 years old).

In another case, in the Garden of Plants at Montpellier, a *Salisburia* gained in 58 years a diameter of 672 millimetres.

The annual growth of the first in diameter is thus seen to have been about 12.64 millimetres; that of the second to have been about 11.6.

In comparing this rate of growth with what has been observed in other Conifers, M. MARTINS records some very interesting facts. In the Botanic Garden of Montpellier, within a hundred yards of the last named *Salisburia*, grew a noble Spruce, which had been planted in 1688. Circumstances led to the removal of the tree when 160 years old. A round of the butt having been preserved, showed that its diameter had increased thus:—When 24 years old its diameter was 152 millimetres; when 47, it was 272; when 58, it was 316; when 65, it was 350. It therefore had not grown half so fast as the first *Salisburia* mentioned above.

The Scotch Pine (*Pinus sylvestris*) affords similar means of comparison. We here translate M. MARTINS literally:—"In every latitude comprehended between 49° and 70° N., that is to say, from Hagenau on the lower Rhine, as far as Kaaford in Lapland, the annual layers of the Scotch Fir diminish in thickness from the center to the circumference. This decrease is rapid, in proportion as the trees are more and more northern. As a term of comparison, I give below, in millimetres, the mean thickness of the layers, up to 100 years, of a large number of Pines observed at Kaaford, in Finmark, (lat. 70°); at Pello, in Lapland (lat. 67°); Gefle, in Sweden (lat. 61°); Halle, in Germany (lat. 51°); and Hagenau, in France (lat. 49°). At Kaaford the mean annual thickness of the layers of wood is 0.0009m.; at Pello, 0.0011; at Gefle, 0.0018;



at Halle, 0.0019; at Haguenau, 0.0032. The mean thickness of the two *Salisburias* above referred to being 0.0065 m., it is clear that they grow much more rapidly than the Scotch Fir, even in Haguenau, in the climate of Alsace. It would be a great mistake to suppose that there is no parallel between the growth of the Scotch Fir in the north of Europe and that of *Salisburia* at Montpellier. In reality, it is in the middle of Sweden that Scotch Fir attains its greatest magnitude. Near Gefle and Upsal, the tree becomes colossal, because it finds itself in a climate that suits it. The summer is, however, too short to enable the annual layers of wood to gain great thickness, and in winter, vegetation is totally suspended.'

Thus, facts seem to show that *Salisburia* deserves to be much more generally cultivated than it is. According to M. MARTINS, and others, the wood is dense and strong—not unlike that of the Orange tree, and by no means resinous; and when the female trees have a male branch grafted upon them, which is easily done, they produce their fleshy fruit in abundance, which, if not of value for useful purposes, have, at least, the merit of being ornamental.

THE PERPETUAL, OR TREE CARNATION.—The appearance of a few plants of this charming flower at the exhibition of the Horticultural Society at Chiswick on Saturday last, reminds me that a few remarks respecting it at this season may possibly prove useful. This variety is commonly called the Winter-flowering Carnation, from the desirable characteristic it possesses of blooming throughout that season. The name of Tree Carnation may be familiar to some, as the plant itself is not of recent introduction, although very few varieties seem originally to have been known, and those have now been entirely superseded by sorts lately imported; for it is our continental neighbors who have been so successful in raising them, and to whom we are principally indebted for these invaluable acquisitions; for not only are the varieties now more diversified in color, but their growth and habit are altogether improved. In addition to their bright and varied colors, they are deliciously fragrant, a desideratum which cannot be too highly appreciated, some of the varieties being equal in perfume to the common Clove. Persons desirous of cultivating this tribe of Carnations should procure nice young plants, say in March, and keep them in a cool frame until the weather permits them to be exposed entirely to the open air; but, even in spring the lights should be taken off whenever it is practicable. Those who have old plants should strike cuttings about the middle of March, as young plants grow rapidly throughout the summer, and make by far the best specimens for winter blooming. Before taking cuttings, the plants should be put into a warm house, or one that is kept rather close; and those who have not this convenience should put them in the warmest part of the greenhouse; if this is done, the plants are excited to grow, and if the cuttings are then taken off, they will strike root more readily. Care should be taken to strike only from vigorous plants, and to select strong and healthy cuttings; for if this is not done, and the cuttings are taken from delicate and cankerly plants, the colors of some of the varieties are inclined to run, besides which, the plants always maintain a sickly appearance. Tree Carnations will supply an abundance of cuttings, as most of the varieties continually throw out a profusion of laterals, which can be taken off at any season without injury to the parent plant; indeed, taking a few of them off in autumn has rather a tendency to strengthen the flowering shoots than otherwise. To insure cuttings taking root, either late in autumn or in spring, they must be struck in a little heat, but the cutting pots should not be covered with a glass, for if this is done, the cuttings will fog or damp off; besides which it is not necessary; and if no glass be used, they will want occasionally looking over, and any grass carefully removed that is likely to create damp. After the cuttings are well rooted they should be potted singly into, say, 4-inch pots, and kept in a rather close and moist atmosphere until fully established, when they should be gradually hardened off in a cool frame. At this stage the tops may be pinched out, which will greatly assist the formation of nice plants. To those who have not the convenience of supplying warmth for striking cuttings during winter, I should recommend their being struck at the latter end of summer, to be potted off and kept in a cool frame during the winter, care being taken to keep them rather dry—a rule which should always be observed in wintering Carnations. The cutting pots should be prepared by first giving a good drainage of any sherds of a porous nature, then a few

rough pieces of turfy loam to prevent the soil from being carried through the sherds; after this, take equal proportions of loam and silver sand, mix together, and fill within a quarter of an inch of the rim, then complete by filling up with silver sand. Tree Carnations will thrive luxuriantly in a good maiden soil or loam mixed with a little silver sand, to which may be added a slight sprinkling of leaf-mold; the same soil may be used throughout the season, except when the plants are first shifted from the store pot, when a little more silver sand should be used. In spring the plants should be removed from the frame, and placed upon an open border, in any favorable situation; but first prepare it by spreading a thin layer of ashes, which will prevent worms from entering the pots. If at this time the plants require potting, a shift should be given them, but care must be taken not to over-pot them. I find that many varieties thrive better if gradually shifted into their blooming pots, say from 3-inch into a 6-inch pot, and so on in proportion. The plants are comparatively no trouble during summer; they merely want watering, and sometimes stirring up the surface soil; but as they grow, care must be taken to secure the stems nicely with some neat sticks. The principal insects that attack them are green fly; which is easily removed by sprinkling with a little tobacco-water. If the weather and situation prove excessively hot in the summer, the plants may be removed with advantage to a border that is slightly shaded from the mid-day sun. If the above mode of treatment is followed, by the autumn the plants will have thrown up from three to eight stems each, and be laden with a profusion of buds, which, if the plants are removed to a greenhouse as soon as the weather is beginning to get damp and cold, will expand, and afford a continuance of blossoms throughout the winter. These Carnations are not only valuable for their display in the greenhouse, but are, I may say, unequalled as a winter flower for the bouquet and other purposes to which cut flowers are applied. The following are the names and colors of 12 of the best and most distinct varieties:—*Attila*, scarlet and white flake; *Belle Zora*, salmon pink, striped and mottled with crimson; *Cassandra*, bright cerise; *Gertrude*, lavender, mottled with white; *Incomparable*, deep rose, striped with crimson; *La Sermi*, bluish white, mottled with rose; *La Vestale*, scarlet self; *Le Zephir*, purple; *Mabrouka*, bluish, striped, and mottled with crimson; *Prosperpine*, large dark crimson; *The Baron*, white, mottled with rose on the edge; *Union*, crimson mottled with white.—*W. B., in Gardeners' Chronicle.*

*SPIRÆA CALLOSA*, *Thouersii*, alias *S. Fortunei*. PLANCHON.—Under this name a very pretty red flowered shrub is becoming common in collections, having been introduced from China by Mr. FORTUNE. With us it is too apt to form leaves rather than flowers, but the rich ruby tints of such as do appear resemble clusters of gems set in green foliage; in a hot summer we have no doubt the blossoms would be abundant. Such, indeed, would seem to be the case on the continent, if we may trust a figure in the *Flore des Serres*, where M. PLANCHON has changed the name to *S. Fortunei*. It is there represented as bearing great corymbose panicles of a blood red color, producing a far more striking effect than anything we have seen in England. M. PLANCHON thinks that this is not the *S. callosa* of THUNBERG, and, therefore, changes its name, and we say very needlessly. His reasoning upon the subject would be admissible, had THUNBERG been a botanist upon the exactness of whose descriptions any reliance could be placed; but as he was just the contrary, his plants, where authentic specimens are unattainable, as is the case here, are so many puzzles, to be identified by probability, rather than by what he says or omits to say. No one, we suppose, can doubt that his plant was some common red flowered Japanese *Spiræa*; that the present plant undoubtedly is; and it answers to his words as well as plants usually do. M. PLANCHON has no evidence that the plant was not *S. callosa*, there is a fair probability that it was; and we cannot perceive the wisdom of perplexing the world with yet another alias, when the only reason assignable for doing so is mere conjecture. In the absence of direct proof, one conjecture is as much entitled to attention as another. But the mania for changing names seems incurable, and we shall now have nurserymen selling *Sp. Fortunei* as a fine new Japanese shrub to the very persons who already have it growing in their shrubberies under the name of *S. callosa*. —*Gardeners' Chronicle.*



## Editor's Table.

THE SEASON, FRUIT CROP, &c.—The season, up to this date, (June 20th,) has been highly favorable to vegetation. From the opening of the buds we have had no violent changes—no cold cutting winds, such as we usually experience during the season when fruit trees are in blossom. During six or seven years past we have not seen so little of the curl in the Peach as we have this season. The trees have somewhat of their former vigorous and healthy look, and as a general thing are loaded with fruit. Trees that have not yielded a single perfect specimen in four or five years, are now bending under the weight of fruit. All around us we see nothing but destruction to the tree, unless thinning be properly attended to.

The earlier Strawberries are now brought freely into market. The *Early Scarlet* and *Burr's New Pine* are the two leading sorts here at present. We have been endeavoring to clear up the confusion which exists in regard to the Cincinnati varieties, but find it a difficult matter. We cannot find any one who is absolutely certain that he has the genuine sorts. We have obtained new sets of plants, and we shall not feel satisfied until we have fruited them next season.

The earliest Cherries are nearly gone. *Belle d' Orleans* was the first with us (our season is ten days or more later than usual.) *Early Purple Guigne* and *Bauman's May* come next; and then *Early White Heart*, *May Duke*, and *Coe's Transparent*. *Goe's Wood* will be ripe in a day or two; and we must say again, that this is an unequalled variety—large, handsome, early, delicious, and a most abundant bearer. Our friend ELLIOT may extol this variety as much as he pleases; he cannot over-rate it. The *Early May*, or *Indulle*, is of no great consequence. The tree is small, and makes a pretty little bush for the garden; but nurserymen will find it not very easy of propagation.

*Roses* are now in perfection here, and so are the *Pæonies*. We have never seen the display of both so fine in the gardens and nurseries here. We hope to have some notes for next month. The Genesee Valley Horticultural Society holds its midsummer show on the 24th.

CALIFORNIA GRAPES.—Mr. M. WALTHALL, Jr., of Stockton, Cal., writes us to know the name of a Grape which is almost the only one grown there. He says, "The wood is vigorous, short-jointed, and light yellowish in color. Leaves—light green, smooth underneath, with large red veins, and in form resembles the drawing of the *White Grape Currant* in the January number of the *Horticulturist*. Bunches—large, long, and loose, slightly shouldered. Berries—perfectly round, black when ripe, except when shaded they are whitish. Skin—thin, little or no pulp, juicy, and sweet. What is it?" Undoubtedly some European Grape that has been carried there; what it is we cannot say.

TO CORRESPONDENTS.—Will "AGE OF PROGRESS," who dates his letter at Cincinnati, be kind enough to send us his address?



**BRITISH QUEEN STRAWBERRIES.**—On the 14th of June, while on a visit at Newburgh, we went in company with Mr. SAUL to see the famous *British Queens*, of Dr. HULL. The place has now passed out of the Doctor's hands, but the Strawberry beds are there as usual, under the care of the same man who was gardener for the Doctor. We found a very fair crop on the plants, a good crop indeed for this country, although a considerable quantity had been gathered. The plants were set in rows 15 to 18 inches apart, and the ground was covered with straw between the rows to keep the fruit clean. The gardener informed us that the crop was smaller than usual, as the bed was old and many of the best plants had died out. He said they had not been mulched with tan, nor had any special care or application of any kind. He spoke unfavorably of the use of tan—thought it killed the plants in many cases, and said that Dr. HULL had changed his views in regard to its effects. He thinks (and we pretty much agree with him), that one of the chief causes of Dr. HULL's success was his deep trenching (four feet) of the ground, and enriching with well prepared composts, and afterwards working in poudrette and street sweepings. Mr. DOWNING, it will be remembered, thought that the great point in the American culture of these *Pine Strawberries*, was to keep them warm in winter and cool in summer, by means of mulching. One thing is very certain, they cannot be grown so easily as the *Scarlets*; but when Dr. HULL succeeds on the top of a high hill on very dry ground, we know of no good reason why others cannot succeed in more favorable locations.

**CATERPILLARS.**—About the middle of June, the trees in New York and Brooklyn were infested with swarms of caterpillars. Elms were everywhere completely stripped, but Lindens, Horse Chestnuts, and in fact all save the *Ailantus*, had suffered seriously. The air was filled with the caterpillars suspended by their silken invisible threads, so that persons walking in the parks and along the side walks, often found themselves in very disagreeable company. We were surprised to find that no special effort was made to abate such a nuisance. The workmen employed in dressing the grounds in the Park, at the Battery, were in the midst of the insects, without seeming to be aware of their existence; and we saw them along the streets of Brooklyn, dangling in thousands by the doors and windows of elegant residences without being molested. It is a great pity that some destructive measure had not been taken while the insects were young, and before they had scattered themselves over the trees. As it is, we should think something might be done. A powerful stream of water, turned upon the trees by means of a garden engine and a piece of hose, might be effective to some extent in bringing them down. It is certainly too bad to permit them to defoliate the trees, and accomplish their transformation undisturbed.

**WISCONSIN STRAWBERRIES.**—We are indebted to our friend A. O. BARCOCK, Esq., of East Troy, Walworth Co., for a very acceptable mess of ripe Strawberries, the first we have seen this season. They were mostly *Burr's New Pine*, with a few *Early Scarlets*, and in size and flavor not easily matched anywhere. Mr. BARCOCK informs us that he picked his first mess of Strawberries on the 31st of May, and that he has now *fourteen* different varieties growing in his bed. Of these, for a hardy, productive, and early plant, he gives the preference to *Burr's New Pine*. We have rarely seen or tasted berries of as large size, or fine flavor, as the specimen he sent us.—*Milwaukee Daily Sentinel*, June 8.

The varieties noted above were not ripe at Rochester until about the 13th or 14th of June. Our first picking of *Early Scarlet* was on the 13th. There is not usually so wide a difference between the climate of that part of Wisconsin and Western New York, but there the spring was earlier than usual, and here later.

Our correspondent, H. W. S. CLEVELAND, Esq., who has contributed to the pages of this Journal since its commencement, has sold his fine farm near Burlington, N. J., and is about to take up his residence somewhere in New England. He cannot but feel something of regret at parting with the orchards, vineyards, gardens, and graperies, to which he has devoted so much attention for many years. We wish him a favored spot for his new home, and hope to have an early account of his improvements.

A FINE HEDGE OF BUCKTHORN.—The finest Buckthorn hedge we have seen in this country, is that enclosing the grounds of ELON HUNTINGDON, Esq., occupied by R. MATTISON & Co.'s nursery, in the north part of the city of Rochester. It is some six or seven years old, about five feet high, and between three and four feet wide from bottom to top, and impenetrable to the sight as a stone wall. Its effect upon the ground enclosed, and indeed upon the neighborhood, is imposing and beautiful.

AN INTERESTING LETTER FROM MICHIGAN, ON VARIOUS TOPICS.—What shall we do to get rid of the Peach worm? It seems to me most writers on fruit-culture entirely under-rate the mischief they do. This is certainly the case, if they are as troublesome in other parts of the Union as in this vicinity. In clay soils, and where the trees stand in a lawn or grass plat, they are less troublesome; but unless some remedy shall be found, the culture of the Peach in gardens, especially where the soil is sandy, will be abandoned in a short time, in this place. Some of our most zealous and intelligent amateur cultivators are ready to give it up in despair. Exterminate the worms ever so carefully with the knife or boiling water, and apply ashes *faithfully*, as directed in books, in the fall you find the worms have made a lodgment in the roots of your trees. If the trees are small, you find them nearly or quite girdled, or so injured that the cold of the following winter kills them; and hundreds of large trees are dead, or are dying a lingering death, by their means. Tobacco has been used heretofore with success; but that fails *now*. A citizen of this place says he has used coffee-grounds placed around the tree, with good effect; but a single season's trial of any thing is insufficient, especially when it has been used on two or three trees only. I last year applied lime to two trees, in the manner recommended by J. C. WRIGHT, in the *Horticulturist* of 1851, page 169. The earth was removed so as to form a basin around the tree, four or five inches deep; this cavity was filled with what masons call putty, that is, a paste made of lime, rising two or three inches above the surface of the ground. This formed a cement impenetrable to the grub; and on examining these two trees a few days since, they were found free from worms, while others standing near, which were treated differently, were seriously injured by them. Whether any bad results might follow the application of this remedy to very young trees, or when growing rapidly, or whether it would be as successful as in this instance, is yet to be determined. (1)

The cold of the past winter has been unusually fatal to trees, shrubs, and plants, here. The mercury did not sink lower than it frequently has done before, but the ground was bare, almost the entire winter, and the changes from moderate to cold were frequent and sudden. Strawberries, unless fully protected, have been generally killed. A great many Peach trees, especially those that had been injured by the worm, have died. A great many dwarf Pears have died; the Quince roots and stocks, up to the union with the Pear, being black, while the Pear-wood and bark appeared healthy. (2) I confess I felt rather sad when I pulled up a number of trees, that in the fall appeared every way promising, and used them for Pea sticks. Well, if we had no troubles of this sort, I suppose fruit-culture would be too much as ADAM had it, when he commenced gardening.

*Isabella* Grape vines in my garden, an inch or more in diameter, have been killed to the ground. In this vicinity, the *Isabella* is much more liable to be winter-killed than the *Catawba*. The lat-



ter ripens its fruit here well, if it has an open or sunny aspect, and is, in my opinion, greatly superior to the former. Is not this semi-tenderness of the *Isabella* corroborative of its foreign origin, which many assign to it? (3) Speaking of Grapes, why is it that some of your Rochester pomologists so "set up" the *Cinton* Grape? It is hardy and prolific; that is all I can say in its favor. What its merits as a wine Grape may be, I know not; but as a dessert fruit, it is inferior, decidedly, to many of the native Grapes found in Connecticut and Massachusetts. Last season I allowed some bunches to remain on the vines until my *Catawbas* were ripe, and even then one could say they were "sour," without being called "foxy." It may do in 45° N. latitude, where they cannot grow any thing better. (4)

Our prospects for most kinds of fruit this season, are very good. The Peach trees, that are alive, have generally fruit enough on them.

The euculio is much less troublesome this season, thus far, than usual. Have they, too, been killed by the winter?

I think we shall have a fair crop of Plums. Our standard Pear trees are generally small as yet; but these young trees have generally fruit on them, enough to give us a foretaste of good things to come.

Cherries and the small fruits promises well. I had *May Bigarreaus* ripe on the first day of June.

Apples are of course more common here than any other fruit. Our varieties are nearly the same as with you. The Apple worm has seriously injured the crop for two or three years past. Many of our farmers are very negligent of their fruit trees. When they have planted them, they think their duty is done; the orchard is laid down to grass, and the trees struggle along the best way they can. Others carry their notions of duty further: they have learned from their fathers that Apple trees should be *trimmed* in the spring; and accordingly around with saw and pruning chisel they go at 'em. Their notions of pruning reminds one of the ideas of the Connecticut deacon, respecting family government. He read in his bible, "correct thy son betimes." He understood this to mean by times; i. e. at stated periods, or set times. Accordingly, he was accustomed to call his boys before him at regular intervals, and give them "the flax," however exemplary their conduct might have been; thus fulfilling, as he thought, a scriptural injunction. However, thanks to our favorable soil and climate, notwithstanding all the negligence of our cultivators, we believe we produce as good Apples as can be found in any part of the United States, the truth of which we will endeavor to convince you, if you will give us the pleasure of seeing you here about the time of our next County Fair, the first week in October.

I have thus poured out before you the contents of my little budget. If you find nothing worth saving, among the shrubs and fragments I have placed before you, they can be easily burned up; if I have communicated anything worth your notice, I shall be gratified. A. S. N.

(1.) We cannot see very serious difficulty in protecting a few garden trees from the grub, if no other remedy be resorted to than that of frequent examinations and removal of the grub. In the orchard this operation would incur a considerable amount of labor. We have known wood ashes to prove an effectual barrier, when placed around the base of the tree on the ground surface where the moth deposits its eggs. Air-slaked lime also answers a good purpose. Either should be applied in the spring, say in May, and be allowed to remain all summer. Both these applications make a good dressing for the tree, when spaded or forked into the soil in the autumn.

(2.) Quinces and Quince stocks suffered in the same way around Rochester in exposed localities. They have never been known to suffer in the slightest degree before, even in the coldest winter. The cause of injury last winter was first a thaw, which laid the ground bare, followed suddenly by a hard frost accompanied with high wind.

(3.) We never entertained the slightest suspicion of its being a foreigner.



(4.) Doctors will disagree. We do not consider the *Clinton* equal in quality to the *Isabella* or *Catawba*, but it is so hardy and productive, and so sure to ripen well when these others often fail, that we consider it valuable. People's taste differ very much in regard to flavor and sweetness or acidity of fruits. What one calls *delicious*, another may pronounce *intolerable*; one is all for sweets, and another all for acids. We know many persons who absolutely prefer good *Isabella* Grapes to *Black Hamburgs* or *Chasselas*. Some people can eat half a peck of sweet Apples at a sitting, while others would no more taste one than they would raw Turnips. It is fortunate, too, that there are such a variety of tastes.

A LETTER FROM WISCONSIN.—Believing that in order to cultivate fruit trees successfully, it is necessary to observe accurately the seasons and the effects produced on the different varieties. I shall (if you desire it), furnish you from time to time, with such facts as come under my own observation in this locality, and of which you can make such use as you see fit. [We will be much obliged for them.—Ed.]

In my last note to you in February, I referred to the blight of Pear trees, and sent you a shoot from an affected tree. A few days afterwards I discovered two others,—one a dwarf, the other a standard,—that exhibited the signs of disease. A person from a general observation of the trees would call them sound, but on close examination you would discover spots on the trunk of the tree or larger limbs, of a different shade from the balance of the tree, but not apparently dead; and on cutting into it you would find the inner bark presenting the same black appearance as in the shoot sent you. The other portions of the tree were perfectly sound, and the last year's wood and buds perfectly fresh. My own impression is, that there was sufficient vitality left to start the trees in the spring, and probably if left (I cut them off and grafted), they would have put forth leaves at the proper time, and continued to grow until the sap carried the disease through the trees, and thus die with the so-called "fire blight." I also observed this spring among my dwarf Apple trees one that did not start at the proper time; and on examination I found the bark, for three or four inches above the ground, entirely dead.

Roses, called hardy, such as *Blanche Vibert*, *La Reine*, *Marquis Boccella*, &c., were killed nearly to the ground, but presented a different appearance from the trees, being dried up, or burned by the heat of a clear sun in a frozen state, there being, as usual, no snow to protect any portion.

This spring has been a very unfavorable one for transplanting, having been very dry, with strong, cold, and drying winds prevailing most of the time; from the middle of February up to the last Saturday, there being less than five inches of rain. On the nights of the 28th and 29th of April we had severe frosts, with light frosts up to the 7th inst. At the time of the severe frosts, most fruit trees, except Apples, were in bloom, but Pear trees suffered the most. On one *Bartlett* and two *Duchesse d'Angouleme*, the leaf-buds as well as blossoms, were entirely killed. The *Duchesse d'Angouleme*, thus far, proves the most tender of any of the twenty-five varieties I have tried. It stands our trying winters well, but is very easily affected by frosts when putting forth its leaves.

There is one other point on which I wish to say a few words, and make a suggestion, hoping that it may be beneficial; and that is, the delay of fruit trees on the route from the east to our western States. I can truly say on this point "our sufferings have become intolerable." A week ago I received a case of fruit trees, forwarded by rail-road from your city, that was only *twenty-four* days in reaching Milwaukee; and a friend informed me a day or two since, that he had an invoice of trees,—shipped by E. and B., of Rochester,—on the 21st of last month, and that he had then heard nothing from them. Cannot something be done to avoid this delay? I will propose that the nurserymen of your city, and other places if deemed best, unite and employ a person at Buffalo, to receive and forward fruit trees and plants from that point. Let this be his *only* business, during the season of shipping trees; and leave the forwarding from that point entirely to

him, to forward according to circumstances, and if sent by rail-road, let him take and forward to the dealer or purchaser a contract, providing against delay. (When on board of steamers bound for the proper ports, there is not much danger of delay.) A person ordering trees cannot tell what route will be the most expeditious; and the nurserymen cannot tell the best route to forward by from Buffalo, at the time the trees reach that point. I do not propose that this expense should be paid by the nurserymen, but let them add to their bills a charge for forwarding, which would be light upon each purchaser, properly apportioned. A. O. BARCOCK.

Some effective arrangement will no doubt be made by the nurseries here, before the fall business opens. One great source of delay is, that all rail roads and steam boats have more freight offered them during spring and fall, than their facilities enable them to transport promptly.

**MINNESOTA AS A FRUIT-GROWING COUNTRY.**—As this country is now attracting considerable attention, and its climate, soil, productions, &c., are becoming subjects of great interest to thousands, I have concluded that perhaps a short communication in regard to its adaptation to fruit culture might not be inappropriate for your columns. While all who are at all acquainted with our territory admit that its advantages are such as to make of it, ultimately, a great country, there are many who doubt whether fruit can be successfully grown here to any considerable extent. The grounds on which these opinions are based, are the high latitude, ( $43^{\circ}$  to  $49^{\circ}$ ), and the extreme cold of a few days in winter, (sometimes  $30^{\circ}$  below zero).

In opposition to these theoretical conclusions I wish to state some facts based upon my limited experience here. In the spring of 1853 we brought up and planted here about 20,000 trees of all kinds, most of which were root-grafted Apples. But besides these were Apple, Pear, Cherry, Plum and Peach trees, of a size suitable for orchard planting, together with a considerable stock of ornamental shrubbery, Roses, &c. These trees all made a fine growth during the summer; indeed, many of them made a greater growth than was desirable, as it was apprehended that they would not be in so good a condition to stand the winter as if the growth was less.

The last winter was one of unusual severity; although, as a whole, it was very pleasant, yet there were several days of very severe cold. At two different times the mercury was as low as  $35^{\circ}$  below zero. It will at once be seen that this was rather a severe ordeal for the unacclimated trees; and I presume it will not be uninteresting to Horticulturists to be informed somewhat in detail of the result.

The Apple and standard Pear trees, of a size suitable for planting, are entirely uninjured, and a few of them have blossomed this spring.

The dwarf Pear trees are generally uninjured. There are a few, however, that made a second growth late in the fall, that are somewhat scorched at the extremities of the branches.

The more tender Heart and Bigarreau Cherries are pretty severely injured, though not killed, while the Dukes and Morellos are in a fine condition.

Plums are uninjured.

Peach trees are pretty badly scorched, but are making a very fine growth this spring; and it is remarkable that worked trees are in fully as good condition as seedlings.

The root grafts include about seventy varieties of Apples. There is a striking difference in the hardiness of these varieties, as shown by their appearance this spring. While some are entirely uninjured, others are slightly, and still others quite severely affected by the winter. After a careful examination I give the following as varieties entirely hardy:—*Peck's Pleasant*, *Tolman Strawberry*, *Porter*, *Red Astracae*, *Famouse*, *St. Lawrence*, *Early Joe*, *Summer Pearmain*, *Tolman Sweeting*, *Lady*, *Wagoner*, *Pomme Gris*, *Red Idgestrie*, and one or two others.

Among those slightly affected are—*Gravenstein*, *Swaar*, *Esopus Spitzenburgh*, *English Russet*, *Raree's Janet* or *Newer Paul*, *White Winter Pearmain*, *Yellow Bellflower*, *White Bellflower*, *Sweet June*, *Dominie*, *Northern Spy*, *Early Harvest*, *Golden Sweet*, *Red Detroit*, and a number of others.



Among those most severely injured are—*Vandevere*, *Maiden's Blush*, *Ladies' Sweeting*, *Summer Rose*, *Summer Queen*, *Newtown Pippin*, *Rambo*, and several others.

*Isabella* Grapes are somewhat injured, some of them being killed down to the surface of the ground. The *Clinton* is perfectly hardy.

All the small fruits, Currants, Gooseberries, Raspberries, (not including the *Antwerps*), &c., perfectly hardy.

The Hybrid Perpetual and Bourbon Roses but little injured, although no protection was given them.

I think it safe to conclude, from the above, that Apples, Pears, Plums, Duke and Morello Cherries, and small fruits generally, may be as successfully cultivated here, as in New York or New England. In the selection of varieties of Apples, however, it will be well to select, mostly, from those embraced under the first head.

Heart and Bigarreau Cherries, and *Isabella* Grapes, will require some protection. Planting them in a situation where they may be sheltered from the rays of the sun, in our bright winter days, will probably be sufficient.

In conclusion, permit me to add a few words in regard to our spring weather. Persons who have never visited this region, conclude that our winters must necessarily be very long, and that spring can scarcely be said to commence before May. A more erroneous opinion could not be entertained. From the experience of two years, I assert that our springs are earlier, more pleasant, and more favorable for fruit, than those of either Western New York, Michigan, Northern Indiana, or Illinois. I have no doubt this assertion will startle some who have been accustomed to look upon the matter in a very different light. But let me state some facts, and leave the candid to judge, from them, whether I am not justified in making it.

Snow had entirely disappeared, this spring, by the middle of March, and by the 20th of the month the frost was entirely out of the ground. On the 9th of April we had a slight fall of snow, which melted almost as fast as it fell; since then we have not seen a flake of snow. From the 1st to the 25th of April we had occasional white frosts, but none of sufficient severity to freeze the ground. Since the 25th of April we have had no frost at all; and since the 1st of May the thermometer has at no time shown a lower temperature than 39°. Since the middle of April our prairies and openings have been covered with good pasture, and cattle have required no feeding. Vegetation of all kinds is in a state of forwardness, corresponding with the temperature. As one instance of this, I will mention that I saw ripe Strawberries on the 30th of May, gathered where they were growing wild.

It may be thought that this has been a remarkable season, and an exception to the general rule. In regard to that, I will say that it has been very similar to that of 1853; and that the "oldest inhabitants" here represent them as nothing extraordinary, but only a fair specimen of the springs in this locality.

But I presume I have spun out this communication to a sufficient length, already, and will therefore bring it to a conclusion. I may, at some convenient time, send you a description of the wild fruits, and other trees indigenous to this section of country. G. C. MERRIFIELD.

MR. MERRIFIELD has our thanks for the valuable information he has communicated. We solicit similar statements from other parts of the country.—Ed.

MR. MATHEW'S CURCULIO REMEDY.—Finding a notice of the committee appointed to test this remedy, in the June number of the *Horticulturist*, with the two following observations—That I objected to the large committee appointed by the N. Y. State Society, and that it will take several years to test the remedy,—through fear of its creating a prejudice or wrong impression on the minds of the community, I have thought best to explain the first, and give my opinion on the latter. As I was authorized by Mr. MATHEWS to have committees appointed by such societies as



I thought best, I selected the Massachusetts Horticultural Society, N. Y. State Society, and the United States Agricultural Society, which met at Washington city. The committees to be appointed were to consist of three persons each; I was thus instructed by Mr. MATHEWS; I could not transgress my authority. The other societies, I believe, appointed three each; at least, I received a letter from Hon. MARSHALL P. WILDER, stating that he was chairman of a committee of three, appointed by the United States Agricultural Society, I think. The secretary of the N. Y. State Society informed me that they had named six persons, giving me their names and residences; I adopted the three first names; and in so doing I venture to say, if one dozen had been appointed and accepted, the test or proof would not have been more conclusive than with the three. They are not only *practical pomologists, but high-minded, honorable men*; consequently their report, whether favorable or not, will have the confidence of the people. This committee is located at Albany, Newburgh, and Macedon. I am experimenting at Syracuse, with others, besides experiments are being made at Columbus and Cincinnati, Ohio, as I am informed. If all of these committees and experimenters, scattered over the country from Washington city to Cincinnati, Ohio, are not sufficient, I think one hundred would not be more so. Mr. MATHEWS thought, also, that the liability to its becoming known would be much greater by confiding the remedy to *so many persons*, than if it was made known to just a sufficient number. I had an objection, also, on account of the labor it would require of me. I had been (and was, up to April,) sick the greater part of the winter; and as Mr. MATHEWS had written out at length his observations on the habits of the curculio, &c., and had requested me to make the same known to every member of each committee, it would impose upon me the necessity of writing a number of copies, which were very lengthy. These are the reasons why a committee of not more than three was accepted.

The next point I wished to notice, was the time you think it will take to test the remedy—viz: several years. I feel fully persuaded, and I think every committee appointed will be of the same opinion, that if it is successful now, *this season*, it will be always, *every season*; because the remedy is philosophical—founded upon nature's laws. It cannot be otherwise, if it answers at all. It is utter destruction to the pests we have to contend with. Every man possesses what is necessary for the operation. The cost is in a manner nothing. I would ask, if you had four or six Plum trees in a row, the branches of each not meeting by four to six feet, and you apply the remedy to the second tree about the time you see they have just commenced making the crescent-shaped incision. You then wait a few days longer, and take the fourth tree; when you arrive there you find that at least one-half are stung. You apply the remedy to this tree, and for the satisfaction of investigators, you let them see you pluck every Plum from five or six branches that are incised, and leave none on but what are sound. Now for the result,—If the fruit on the first, third, fifth, and sixth trees, are all stung, and fall off, and the second tree is overloaded with fruit, and a sufficient crop on the fourth, and not a Plum can be found punctured on the five or six limbs, from which the punctured fruit had been previously picked, I ask, is this not conclusive? The remedy has saved the Plums where it was applied, and all the contiguous trees to which it was not applied, cast their fruit. The above are the facts in Syracuse. We have a Nectarine tree which has never borne a *single fruit*. We waited until fully one-half were punctured by the turk, and then the application was made; the punctured fruit on some limbs were pulled off, on others the incision was cut out of each Nectarine. The result was as above stated; and I can now show you as handsome fruit on this tree as ever grew, and this is the first time for years. So are Plum trees loaded with fruit, where the remedy has been applied. I am satisfied, in my mind, that if the remedy is applied strictly as ordered, that *no tree will fail of having a full crop of fruit any year*. Recollect, the application has to be made only once *each year*. A. FAHNESTOCK, *Syracuse*.

We certainly had not the slightest intention to create prejudice, or convey any false impression concerning Mr. MATHEW's remedy. We entertain strong hopes that it will prove effectual, and have entire confidence in Mr. M.'s integrity in the matter, whether it

do or not. It was announced in the journal of the N. Y. State Agricultural Society, that a committee of six persons were appointed to test the remedy, and we saw it stated afterwards that Mr. FAHNESTOCK objected to such committee, and had selected three of them only. We gave this merely as an item of intelligence. We said that it might require several years to make a reliable statement; but if the committee can be satisfied to report at the close of this curculio season, we shall be happy to announce the fact. The circumstances related by Mr. FAHNESTOCK are so far quite satisfactory.

INSECTS.—I send you, accompanying this, specimens of a worm which threatens to be to the Apple, Pear, and Cherry, what the curculio is to the Plum and Apricot, only that besides destroying the fruit, they seriously retard the growth of the tree, which renders them doubly destructive.\* They usually commence operations in the bud, and are then so minute as scarcely to be detected by the naked eye: a brown worm a line or so in length. When one bud is destroyed, they migrate to another; and as the tree progresses in growth, eat in at the base of the young shoots, and also at the base of the fruit stalks, thus destroying the fruit, and injuring the growth of the tree. They belong to the leaf-roller genus, forming for themselves a secure retreat by rolling together the edges of a small leaf, or else hiding among the bracts at the base of the fruit clusters, and are nocturnal in their habits. I have never been able to trace the progress of their metamorphosis, and know nothing of them except in the larvæ state.

Last season they were very destructive to the fruit crop in this section, particularly Apples and the finer sorts of Cherries. The numerous bracts at the base of the fruit clusters of the latter afford them a peculiarly safe and convenient retreat. They seem to be even more abundant this season than they were last.

I am inclined to think that the depredations spoken of by your correspondent, A. G. HANFORD, of Waukesha, Wis., in the August number of the *Horticulturist*, for last year, were committed by this worm instead of the weevil, to which he attributes it. A little careful observation would soon settle the question.

It is important that every fruit culturist should be on the alert to discover, and devise means to destroy the constantly increasing list of enemies to the fruit crop; for, with the utmost care, success may be regarded as uncertain, except in some favored localities.

I am happy to acknowledge the receipt of those *English Russets* which you had the kindness to send me. I think they closely resemble the seedling russet which I sent you. The latter was very likely produced from seeds of the former, but are a little less acid, more flattened, not as large or productive, and not as good keepers as the seedling. This, at least, is my experience. I may be deceived; and it may be the identical *English Russet*. R. B. WARREN.—*Alabama, N. Y.*

ENCLOSED I send a small section of an Apple limb, enclosing two "limb borers." I have not seen any description of them in eastern fruit books. Perhaps they may be of interest to you. The pair are in the situation in which they were on the tree, and are supposed to be male and female. The branch is cut at the lower end of their hole; you will see that they entered at the base of a fruit spur. They sometimes enter branches one half or three-fourths of an inch in diameter, which generally withers or is broken off by the wind at the point of their operations. I have never before discovered but one in a burrow. J. C. BRAYTON.—*Astalan, Wisconsin.*

The borers referred to had cut through the papers enclosing them and disappeared, leaving only the perforated branch and a quantity of saw-dust. The branch was bored completely hollow, throughout.

\* We have observed these insects—leaf rollers—for many years, and usually send a person round to pick them off and destroy them. They do not appear to increase with us, nor to work any serious mischief.—Ed.



WINTER PROTECTION OF GRAPE VINES.—What degree of cold Grape vines can endure without injury, is an interesting question to cultivators in an inclement climate. Where I am located, we may expect the thermometer to sink to 20° below zero, Fahrenheit, every winter, though there may be exceptions. On the 16th December, 1835, I saw it at —37° (the night of the great fire in New York), at 2 o'clock A. M.

My house is span roofed, glass all around to within eight inches of the ground. This past winter, thinking to provide against any extremity of cold, had the vines covered with tan-bark and saw-dust. The result has proved that it was a most injudicious method. The buds on the length of cane of last season's growth were injured very materially, so much so that several of the vines we have cut down to the first healthy shoot below the dead buds.\* The wood was well ripened. The injury was *probably* owing to the moisture in the covering freezing, and in mild weather keeping the buds too moist.

The name of the unproductive vine I wrote you of was *Prince Albert*, pruned on the spur system, and has been well managed.

Uncovered vines the 28th March,† and this day we commence thinning the berries in the bunches. M.—*Oneida Co., N. Y.*

AMERICAN POMOLOGICAL SOCIETY.—SAMUEL WALKER, Esq., of Roxbury, Mass., general Chairman of the Fruit Committee appointed by the American Pomological Society, has issued to the Chairman of each State Committee the following circular, calling attention to the more important points which they are expected to investigate. It is very evident that if the questions presented in this circular be answered by accurate reports from various States and sections of the country, we shall be put in possession of a vast fund of information.

DEAR SIR:—The Constitution of this Society provides that there shall be in each State a Standing Fruit Committee, of five members; and of the Committee for the State of \_\_\_\_\_ the gentleman whom I have the honor to address was appointed Chairman, with power to fill any and all vacancies in his Committee.

At the meeting of the Society to be held some time during the present year, an important and delicate duty is to be discharged, namely—to present to the country a full list of the fruits that are worthy of cultivation, and, as well, of those that cannot be so recommended. In the preparation of these lists, the Society will naturally, and very properly, look to the various State Committees for well-digested information, to aid them in their labors, and to guide them in their decisions.

This single view of the case, (and there are others that could be presented,) will alone show how important it is, that the State Fruit Committees should be organized and at work, in good season; and that they should labor in concert, as the only means of obtaining systematic and satisfactory results.

If the Committee for your State is not already appointed, I trust that you will at once (as you are fully authorized by the Society to do,) select and appoint four competent persons to be your associates; and that you will call together this Committee *at the season of maturity* of such fruits as abound or excel in your State, to examine specimens and elicit information concerning them; and that you will furnish me with a Report for your State, previous to the Society's next meeting.

To render the various returns more systematic and thorough, it has appeared to me best to adopt for our guidance, the present year, the recommendations and forms contained in the circular letter of my predecessor, the lamented DOWSING, which are in substance as follows:—

The State Committee will endeavor to ascertain these points, viz:—

*First.*—Upon what kinds of natural soils, superior kinds of any of the standard fruits are grown.

\* We prefer clean dry straw to wrap the vines in; and if this be an insufficient protection, we lay mats over them.

† Quite too early for a cold vinery in your latitude; we never uncover ours until after all danger of hard frosts is over.—Ed.



in your State; particularly whether lime or potash abounds in the soil, or subsoil; whose decomposition furnishes these, or other mineral substances, essential to the perfection of the fruit.

1. If the result has been obtained by the use of manures, or any peculiar system of cultivation, what kinds of manures or composts have been applied;—how, and when; and upon what kind of natural soil. Also, what mode of culture has been pursued.

2. In districts remarkable for the excellence of a given variety of good fruit, ascertain if such is the case upon *various soils* in such district, or only upon particular soils; and in the latter case, the character of such soil. Also, how large are the annual crops; and how long the variety has been in cultivation.

*Second.*—What are the most profitable market fruits of good quality in your State. Also, the best fruits for the table; and whether any particular sorts require extra pruning, manuring, or other peculiar mode of culture.

1. Which varieties succeed *only*, and which thrive best, upon particular stock, (as the *Louise Bonne de Jersey* Pear on Quince, &c.)

2. What varieties have been tried and condemned as inferior, or worthless, by experienced fruit growers in your State.

3. What are the synonymous, or local names, by which any standard varieties are known in your State.

4. Whether the trees of any particular varieties are particularly liable to blight, or other and what diseases.

5. What Grapes are the best for vineyard culture; (if vineyards are planted in your State.)

6. What Raspberries, Strawberries, Currants, Apricots, Nectarines, and other minor fruits of good quality, are found best adapted to culture in your State.

To arrive at uniformity in judging of the flavor of fruits, it will be well to use the comparative degrees of merit adopted at the Convention, viz:—GOOD, VERY GOOD, BEST. And that we may agree regarding these terms, certain standard sorts should be taken as representatives of these classes, wherewith to compare other fruits, and ascertain their value.

The following form, and the varieties therein named, will serve as examples for this purpose:

<i>Good.</i>	<i>Very Good.</i>	<i>Best.</i>
APPLES, .....Maiden's Blush.	Gravenstein.	Esopus Spitzenburg.
PEARS, .....Napoleon.	Bartlett.	Seckel.
PLUMS, .....Lombard.	Washington.	Green Gage.
CHERRIES, .....Black Heart.	Elton.	Black Eagle.
PEACHES, .....Crawford's Late.	Old Mixon Free.	George IV.

Fruits falling below the rank "*good*," (excepting culinary sorts,) are unworthy of cultivation, unless their hardihood and productiveness are so remarkable, as to make them valuable in particular localities, or for market cultivation.

Though the attention of this Committee is understood to be chiefly directed to acquiring information regarding varieties of fruit already known, yet some attention should be paid to the examination of remarkable *new* varieties. Unless the latter, however, rank as high as "*good*," they ought not to receive attention; and a new sort, even if excellent, if it is also meagre, unhealthy, or unproductive, is unworthy of notice.

When a variety of "*very good*," or "*best*" quality is presented to the examination of a State Committee, and there are doubts whether it is really a new variety, specimens should be sent to the Chairman of the Fruit Committee at Boston, Philadelphia, or the Chairman of this Committee, so that it may be subjected to more complete examination. Outlines, also, and careful descriptions of new varieties of high merit in all respects should be made for the use of the Society. In drawing up such *descriptions*, the "*Pomological Rules*" adopted by the various Horticultural Societies should be followed as a guide, in order to avoid diffuseness and variety of terms on the one hand, or imperfection in details on the other.

SAMUEL WALKER, *Chairman General Fruit Committee.*

## Answers to Correspondents.

(W. E., Salem, Wis.) **ASPARAGUS.**—We will comply with your request soon; at any rate before planting season.

**AMERICAN HOLLIES.**—A Correspondent inquires where plants of the American Holly can be had. Will any nurseryman who has them for sale make it known?

(Mrs. T., Columbia, Tenn.) **CAMELIAS.**—We cannot do better than refer you to a short article, on pages 131 and 132 of our last volume. It gives some excellent and reliable hints on soil, potting, shifting, temperature, pruning, watering, &c.

(J. S. J., Greencastle, Ia.) **THE McVEAN PEAR.**—This is a seedling of Monroe Co., N. Y. A large, handsome fruit, of good quality, though rather variable. Tree very vigorous, and an abundant bearer. It is not much disseminated, and may not prove worthy of extensive culture.

("A Toronto Amateur.") **PIRACY.**—We can pay no attention to your statement, until you give us your name, or the name of the book referred to. We make it a rule to require the name of all correspondents, when we have to rely upon their good faith for the accuracy of their information.

(T. E., BARNESVILLE, O.) We would recommend you *Allen's Treatise on the Grape*—price, we think, \$1.25; *Chorlton's Treatise*, 50 cents; and *Lenchar's on Holhouses*, &c., about \$1.25. You may get them in Cleveland or Cincinnati. **DERBY**, the publisher in the latter place, keeps a good assortment of such works.

(D. L., Normandale, C. W.) **INSECTS.**—We think your trees must have been injured by the small caterpillar you describe; but you should have stated the nature of the injuries, whether it was the destruction of the foliage, or perforation of the wood, or what else.

**BONES.**—We would prefer breaking them up into small pieces, or grinding into powder in a raw state, to burning. Fire destroys the organic parts, which are the most immediate fertilizers.

**PROPAGATION OF ORNAMENTAL TREES.**—Be kind enough to designate such as you want information about, and we will endeavor to comply with your request.

**TAN ON STRAWBERRIES.**—In answer to your correspondent "T," in the June number of the *Horticulturist*, respecting tan-mulching for Strawberries, I think his error consisted in applying too much tan-bark immediately over and around the plant. For ten years I have used tan-mulching for Strawberries, but I never permit more than a quarter or half an inch deep immediately around any plant, and none whatever so as to clog or smother the plant. The rest of the bed I cover from one to two inches deep, and apply it when I set out the plants or dress the bed either fall or spring. I have never lost a single plant from mulching with tan, but think they have been greatly benefited. The only thing I dare cover the plant with, even to the depth of one inch—which is abundant for our coldest winters—is clear loose straw; and that I remove from off the top of the plants on the earliest opening of spring, so as to give the plants an abundance of good air constantly. The sulphate potash and ammonia solution should be applied freely and directly on the plants and leaves, if not stronger than  $\frac{1}{4}$  lb. sulphate potash,  $\frac{1}{4}$  lb. sulph. soda, (glauber salts,) and  $1\frac{1}{2}$  ounce ammonia, to 6 gals. water. The tan is excellent to spade in after using for years as a mulch. If any doubt this, let them place a few chips of old tan-bark under a new plant, and in a few months the fibrous roots will fasten in great numbers on every part, like tree roots to a bone. **AMATEUR.**

Will some correspondent of the *Horticulturist* furnish its readers with an article on the culture of the Sweet Potato, and the best mode of preserving seed during winter. **JNO. D. LEE.**—*A'hens, Ill.*

See June number.

**PLAN FOR FRUIT HOUSE.**—I wish to inquire of you for a plan of a fruit-house, in connection with an ice-house. It is generally understood that tender and perishable fruit can be kept perfectly sound and good, almost any length of time, provided they can be kept in a cool place, but little below the freezing point. Such a fruit-house as would preserve Raspberries, Strawberries, Blackberries, Peaches, early Pears, Apples, Apricots, Nectarines, Cherries, &c., the year round, would be a valuable auxiliary to our kitchen. Now, can you, or any of your readers, give me the plan of such a house, through the columns of the *Horticulturist*? JOHN GAGE.—*Waukegan, Lake Co., Ill.*

We cannot give such a plan. Berries and stone fruits may be cooled in an ice-house, or they may be preserved a day or two in it; but they will soon lose their freshness and flavor.

**EFFECTS OF LAST WINTER ON OSAGE ORANGE HEDGES.**—I am anxious to have from some of your correspondents who have been engaged in the cultivation of Osage Orange for hedges, what has been the effect on them from the weather of the past winter. I have one, about 100 yards long, transplanted three years ago the present spring. The two first winters I protected it slightly with Sedge Grass; but it having attained the size of a man's thumb at the base, I considered it safe from the cold, and risked it last winter without protection. All the growth of the last year was killed, and many, say about one quarter of the plants, killed down to the ground. They are sprouting from the roots, however, but the beauty of the hedge is gone. It had not the average exposure of shrubbery in the New England States, and had been well treated and tilled. J. W. FOWLER.—*Milford, Conn.*

Hedges of various ages on our own grounds have passed this last winter and previous winters, when the cold was more intense, without the least injury. Even yearling plants in the nursery were uninjured, save on the points. In a neighbor's hedge, however, some five or six years old, we have noticed an occasional plant killed to the ground. The plants are over an inch in diameter. The plants in this hedge were set thinly in a double row. We think that when they are set close, say six inches apart, they shelter each other, and are less liable to injury. The most destructive element here, during last winter, was high winds of several days continuance, when the ground was unprotected by snow, and the weather freezing, but not intensely cold. The roots of the Quince were injured in exposed places, just at the surface of the ground, and a little below. This has never occurred before, during our residence in the Genesee Valley—a period of fourteen years; and it may never occur again.

### Notices of Books, Pamphlets, &c.

**FARM IMPLEMENTS, AND THE PRINCIPLES OF THEIR CONSTRUCTION AND USE;** an elementary and familiar treatise on Mechanics, and on natural philosophy generally, as applied to the ordinary practices of Agriculture. With 200 engraved Illustrations. By JOHN J. THOMAS. NEW YORK: HARPER & BROTHERS, Publishers.

Mr. THOMAS has done the agricultural community a great service in the preparation of this book. It was much needed. Improvements in the construction of farm implements and machinery have contributed largely to the progress which has been recently made in the art of cultivation. Compare for a moment our modern plows, cultivators, or horse-hoes, reapers, mowing machines, straw and hay cutters, root cutters, &c., with the farmer's implements of over five and twenty years ago, and what a difference we see. Science has been silently and steadily at work in effecting the vast improvements, placing new powers in the hands of the husbandman, by which he is not only enabled to cultivate three or four times the amount of land with the same amount of labor, but to do it infinitely better. Besides, this application of science to the improvement of implements and machines has elevated the art of husbandry from the condition of a rude, unintellectual routine of drudgery, to that of a pursuit which is daily attracting to it men of wealth, education, and refinement.

Every farmer, and every farmer's son, must be aware of all this; a glance among the stock of implements cannot fail to suggest to them the service which science and invention have conferred upon them. But it is not enough to know this. The principles upon which this great improvement are based should be studied. No man should be satisfied with merely the possession of the best plow, or reaper, or thrashing machine; but should study



its construction, the various forces which combine in giving it completeness and efficacy, and the natural principles or laws from which these forces spring. It is this sort of study only which will make implements and machinery intelligible, and enable the operator to adjust their parts, and use them to the greatest possible advantage.

Comparatively perfect as are our modern implements, no one will say that they cannot be still further improved. Our belief is that the next ten years will do more for them than has the past twenty. Mechanics have not received proper aid and coöperation from the practical cultivator, simply because the cultivator has thought it not his province to invent, but to use the inventions of others. When the farmer will study the principles of construction, he will soon be able to suggest improvements to the mechanic; and then we may expect improvements in earnest.

Mr. THOMAS' work will give an impulse to this matter, which cannot fail to result in great benefits to the agricultural interests of this country. We wish, therefore, to see it placed immediately in the hands of every farmer and farmer's son, as an indispensable book, and school commissioners should see that it has a place on the shelves of every rural district school library. It is admirably adapted for popular use as a text book. The different subjects are judiciously divided into chapters, and sub-divided into sections; the illustrations are ample and excellent; the style is plain and concise, unencumbered by needless technicalities; and there is everywhere that carefulness and precision that characterizes all the writings of Mr. THOMAS. Every statement is made in such a straightforward manner that even a child could not mistake or fail to discover the point and meaning. This we consider an excellency worthy of being pointed out in a book of this kind.

In addition to thus expressing our opinion of the book, we would gladly, if space permitted, give an epitomized statement of its contents, but we must refer to the book itself.

### Horticultural Societies.

**BROOKLYN HORTICULTURAL SOCIETY.**—This society held a "Festival of Roses" on the 15th and 16th of June, in the spacious and elegant public hall known as the "Athenaeum." We had the pleasure of making a hasty visit on the first day, but it was immediately after the hour of opening, and before the committees had finished making their awards, or had placed the names of contributors on the objects exhibited; we are therefore unable to speak of the show in other than general terms, except in a few cases. The articles were placed on tables distributed irregularly around the room, as so many flower beds on a lawn. The cut Roses were inserted in wet sand, covered with a wire net-work, and the pot plants were tastefully grouped on tables, covered with green glazed cloth. Thus the arrangement was not only effective, but enabled visitors to make a satisfactory examination of every object.

There were but five or six collections of Roses, and some of the best were not named; a very great defect. The best named collection, we believe, was that of J. W. DEGRAW, Esq., President of the society. MESSRS. JAS. WIER; GABRIEL MARC, of Astoria; and WM. BURGESS, of Williamsburg, presented good collections. Mr. BURGESS had some standard Roses, taken that morning from the open ground; one was worked with a slender-growing variety called a "new Weeper," the flower of which did not appear to possess much merit; and above this, on the same plant, *Geant des Batailles*. He had also several seedling Roses, some of which promised well. He had fine blooms of *Paul Ricant* and *Caroline de Sansal*, some fifteen varieties in all.

An ornamental design contributed by Mr. HAMLYN, gardener to J. C. LANGLEY, Esq., of Bainbridge, L. I., occupied a table in the center of the room. It was a rustic stand in form of a tree, the branches of which were laden with boquets and clusters of ripe Grapes; a very attractive center piece. The boquets and fruits were exhibited on this table.

Mr. J. E. RANCH contributed a large collection of pot plants, including many of the newest and best Fuchsias, Fancy Pelargoniums, &c. There were several tables of pot plants, many of them Fuchsias, well grown magnificent plants. On one table we noticed a large fine plant in bloom, of *Erythrina*; a fine *Ardisia*, loaded with fruit; a large *Adonia versicolor*, in bloom; besides *Euphorbias*, *Mahernias*, &c. On another table, good plants of *Allamanda schottii*, *Leora coccinea*, and *Gloxinia agrostynea*. Another table, we think Mr. SNOOKS', had a nice collection of new Gloxinias; and another a small collection of Verbenas, in pots, but they were not in exhibition trim.

The show of fruits and vegetables was very meagre for the season. Mr. COLLOPY, gardener to J. H. PRENTICE, Esq., offered three excellent heads of Cauliflower, and three heads of tolerable Lettuce. On the same table were some new Potatoes, from Mr. GEO. INGRAM; and very large Cucumbers from the garden of R. L. COLT, Esq., of Patterson, N. J. We observed but one kind of Strawberry, offered in two or three dishes, by Mr. COLLOPY; they were not named, but appeared to be *Hovey's Seedling*. We noticed but one dish of Cherries, and they were not ripe. We believe the Cherry crop is poor around the coast this season. Grapes, from the garden of N. STETSON, Esq., Bridgeport, fine bunches of *Black Hamburg*, *Muscat of Alexandria*, *Cannon Ball Muscat*, and *White Frontignan*. From Mr. HAMLYN, gardener to J. C. LANGLEY, *Black Hamburg*, *Zinfindal*, and five other varieties. Mr. LANGLEY's vineries, at Bayridge, L. I., are very extensive, and we have no doubt are well managed.

We would suggest that the officers and committees of the society endeavor to persuade exhibitors to label their plants legibly before placing them on the table; even what are called "common" plants, should be named. There is always a delinquency on this point, in new societies, and it cannot be remedied at once. The Brooklyn society appears to be in excellent hands, and we are happy to learn that so far the citizens have given it a generous support.

ASTORIA AND RAVENSWOOD HORTICULTURAL SOCIETY.—This newly started Society held its first meeting on the 8th and 9th inst., and was very creditable to the promoters and practical talent of the neighborhood. We say the neighborhood, because the fine productions that were there exhibited were all from the immediate locality. Astoria and Ravenswood are two approximating and thriving villages, fast rising in importance, and around whose precincts are rapidly clustering those pretty rural dwellings with their accompanying neatly laid out and well kept gardens—an escape, it may be said, from the filthy, disease-engendering streets, and the closely pent in city of bricks and mortar, but heavily taxed New York. As respects the advancement of Horticulture, and the encouragement held out to the amateur fond of his garden, the above neighborhood holds out every inducement. Its proximity to business, (only half an hour's ride by steamboat or stage from the city), situated along the banks of the romantic East River, and having in its midst several of the best horticultural establishments in the State, which are conducted by men whose abilities are amply verified in their practice, liberal minded, devoted to their profession, and always ready to give advice to the novice. There are also several floral and nursery gardens, conducted by men who know well how to supply the wants of the people, and what will flourish in the locality, which is salubrious and sheltered, and we have nothing wanting. There appears at present to be a determination to have an earthly paradise here—may this present move be successful. There is nothing to prevent it but the lukewarmness or backwardness of the public generally, which I am sorry to say was somewhat shown on the present occasion. Notwithstanding the exertions of the best practice, funds are wanted to support such institutions, and if not forthcoming, the thing cannot proceed. Several gentlemen have liberally come forward with their assistance, and we hope that the zeal of those who have so generously commenced in this good undertaking, may not be swamped by the want of means to render such a society permanent, and continue its usefulness.

This, and the neighboring Brooklyn society, are a secession from the New York one; they combine the "bone and sinew" of that institution, and have separated from it for reasons best known among themselves. If they could be induced to amalgamate into one body, we might yet have for the Empire City a Horticultural Society, worthy of the name and the place.



Taken collectively, the show was very good, and the various exhibitors deserve the greatest praise. Among the best productions were *Tetraloea verticillata*, from Mr. WOODLEY'S gardener, THOMAS DUNCAN, three feet across, and loaded with its beautiful blue flowers to the pot edge. *Hoya bella* and *Cyrtocarpus reflexa*, from the same. *Cerodendrum Kampferi* and *equianatum*, from Mr. HOVEY'S gardener, ALEXANDER GORDON; four feet high and as much across, well bloomed. *Tecoma Asiatica*, from Mr. BLACKWELL'S gardener, ROBERT MORRISON; a perfect gem. Fine *Black Hamburgh* Grapes from ALEXANDER GORDON. Fourteen species of *Mammillaria* and *Melocacta*, including a fine specimen of *senilis*, from Mr. VANDENVENTER'S gardener, WM. GRANT, to which a special prize was recommended. *Cattleya Forbesii*, *Dendrobium densiflorum*, *Oncidium peruvianum*, *Epidendrum purpurea* (var.) and *Cypripedium puberulum*, from Mr. HOGG; not for competition. There were also several seedling *Verbenas* of good form and extra quality, from Mr. ISAAC ECHANAN among which was one nearly black, named *Uncle Tom*; not for competition. *Ducheydium cypripedium*, twelve feet high, from MESSRS. THORBUEN; and *Cryptomeria Japonica*, eight feet high, from Mr. MARC.

TOLEDO (O.) HORTICULTURAL SOCIETY.—The first weekly meeting, for the season, of the Toledo Horticultural Society, was held on the 14th of June, and was well attended. The show of fruits was small, as was to have been expected so early in the season.

*Cherries Exhibited*.—By C. E. Perigo, Cleveland Bigarreau. By Frederick Bissell, Mayduke, and Black Tartarian. By T. M. Cooley, Mayduke, Knight's Early Black, and Elton. By M. Johnson, Black Tartarian. By Mrs. E. Bliss Mayduke. By D. Wadsworth, Black Tartarian. The Maydukes were almost, without exception, very fine, as were also the Cleveland Bigarreau.

*Strauchberries*.—By M. Johnson, Hovey's Seedling. By H. Rentnik, Hovey's Seedling, and Large Early Scarlet. By C. E. Perigo, Large Early Scarlet.

*Gooseberries*.—By C. E. Perigo, Amber, very large and fine. An unknown variety, by C. E. Woodruff.

In vegetables, the show was quite respectable. In flowers, it quite surpassed expectation.

Maddocks, Perigo and Prentice, exhibited forty-three varieties of Hybrid Perpetual, Moss, and Bourbon Roses, specimens of *Rhododendron*, *Ficus elasticus*, *Cryptomeria*, *Arbor Vitae*, *Warriana*, and several other varieties of Evergreens, and several varieties of *Paeonias* in bloom. Hanson & Co. exhibited four varieties *Calceolaria*, *Cactus Ottoluis*, and *Cactus Cucacanthus*, all in bloom. Boquets, without lists of the flowers, were presented by Mrs. E. Bliss, Mrs. M. Johnson, Mrs. J. W. Scott, Mrs. T. Dunlap, Mrs. C. E. Perigo, Mrs. H. Bennet, Miss M. Young, and Hanson & Co.

MR. WILLIAM MACHEN, a young artist of Toledo, presented for inspection his collection of paintings of "indigenous birds of the neighborhood," embracing upwards of a hundred varieties, collected and painted from life by himself, and some of them for the first time now brought to public notice. The collection elicited universal admiration, as well from the industry and enterprise exhibited by Mr. Machen in obtaining it, as from the truthfulness with which nature had in all instances been copied.

The meetings of the society are to be held weekly through the season.

ALBANY AND RENSSELAER HORTICULTURAL SOCIETY.—We have received a pamphlet containing lists of officers, committees, and regulations for 1854. Summer exhibition, June 15th; Annual exhibition, September 6th and 7th; Winter exhibition, February 21st, 1855.

OFFICERS FOR 1854.—HERMAN WENDELL, M. D., Albany, *President*. C. P. WILLIAMS, Albany; AMOS BRIGGS, Schaghticoke, Rensselaer Co., *Vice-Presidents*. JOSEPH WARREN, Albany, *Secretary*. LUTHER TUCKER, Albany, *Treasurer*. V. B. DOWD, B. B. KIRTLAND, J. M. LOVETT, L. MENAND, E. CORNING, JR., JAMES WILSON, JOHN S. GOOLD, A. F. CHATFIELD, *Managers*.





PEAR.



## Strawberries and their Culture.

THE discussion of the Strawberry question, which has occupied the pages of agricultural and horticultural journals so largely for a few years past, has been the means, directly and indirectly, of advancing materially the cultivation of that fruit. We find ample evidence of this in the more abundant supply of our markets, and in the production of a large number of seedling varieties. Recent letters from correspondents in all parts of the country, as well as the reports of late exhibitions, all testify to the very general interest which is felt on the subject, and the progress that has been made. But, after all, we are constrained to say that our cultivation is yet very indifferent. The size and appearance of the great bulk of fruit offered in market, convince us of this. Those who know how to cultivate, are in many cases slovenly, or act upon the principle that good culture will not pay; while there are many who fail for the want of correct information. We have now before us a large number of inquiries on the subject. One wants to know how to prepare the soil; another, when to plant; and another, *how* to plant. Several correspondents who are well informed on the subject of cultivation, ask us to give them the names of the best perfect-flowering sorts, as they are tired of keeping separate the staminate and pistillate varieties. We have therefore thought it might be well to offer a few hints which will serve as a general answer.

We will state here, at the outset, that to cultivate the Strawberry successfully, is but a simple matter. To grow large, handsome, fine-flavored fruit in abundance, it is not necessary to employ a chemist to furnish us with a long list of specifics, nor even to employ a gardener by profession who can boast of long years of experience. Any one who can manage a crop of Corn or Potatoes, can, if he will, grow Strawberries. We say this much by way of encouragement, because so much has been said in regard to various methods of culture, and various applications and specifics, that some people have become persuaded that a vast deal of learning and experience is necessary to produce large crops of Strawberries.

Judging from what we have seen, we believe that the great cause of failure is negligence. The Strawberry plant—not like a tree, which, when once set in its place, remains there—is constantly sending out shoots (runners) in all directions, taking possession of the ground rapidly around the parent plant. In a short time, therefore, unless these runners are kept in check, the ground becomes entirely occupied with plants, the parent plants become exhausted, and the ground can no longer be stirred or kept in such a condition as is necessary to sustain their vigor. The result is, the ground is covered with a mass of starved and weakly plants, choking up each other in a hard, uncultivated soil, and producing a sparse crop of small, insipid berries, that dry up on their stalks before they are ripe, unless rain happens to fall every day.

The constant stirring of the soil around the plants, is one thing which in our



climate is absolutely necessary; and any system of culture which precludes this, or throws any obstacles in its way, is defective. If any one will examine his Strawberry beds, he will find the plants along the outer edges of the beds, where the soil has been kept clean and fresh by the frequent use of the hoe, vigorous and healthy, with luxuriant dark green foliage, and large, fine fruit; while in the interior of the beds, where the plants have grown into masses, and covered all the ground, so as to prevent its cultivation, they are yellow and sickly looking, and the fruit poor and worthless. This we see in our own grounds, and everywhere that we find plants growing under similar circumstances. Does not this show the necessity of cultivation close around the plants? No matter how deep we may trench the soil, or how unsparing we may be with manures, or how copiously we supply moisture, this cultivation can not be dispensed with, if we aim at producing fine fruits and abundance of them. "But," says one cultivator, "by allowing the ground to be all occupied with plants, we save all the labor which would be consumed in removing the runners, and we avoid the necessity of applying a mulching to keep the fruit clean." Very true, you save some expense; but what do you get in return? A crop of fruit not fit for the table—small, insipid, and so dirty, if a heavy rain occurs about ripening time, that it must be put through the wash-tub before it is placed on the table. It is possible that the market grower may be able to produce berries of this kind at a less price per quart than he could by a careful, cleanly, and thorough system of culture; but then he can expect to sell such fruit only when no better can be had. We have some doubts, however, as to the economy of bad culture in the long run. If a proper system were adopted at the outstart, and followed up with regularity, it would not be found so profitless or expensive. In this, as in every other kind of culture, a system is absolutely necessary. A certain routine of operations which are easily executed if taken at the right time, become burthensome when deferred; and being so, they are not unfrequently put off altogether. Precisely thus it is that Strawberry beds are neglected, both in market gardens and private gardens, until they are grown wild beyond hope of recovery. Now, we say to every one who wishes to cultivate Strawberries, resolve at once upon abandoning the "lazy-bed" system; and if you cultivate but a square rod, do it well.

We advise planting in rows not less than two feet apart, unless ground be very scarce, when eighteen inches might suffice, and the plants to be twelve to eighteen inches apart in the rows. In extensive field culture, the rows should be at least three feet apart, in order to admit the use of the plow and cultivator between them, or even the passage of a cart to deposit manures or mulching material. The spade and wheelbarrow are too costly implements for an extensive culture where labor is scarce and high, as with us. From the time the plants are set until the fruit is gathered, the runners should be cut away as fast as they appear, and the ground be kept clean of weeds, and well worked.

In the fall, or before the setting in of winter, a mulching of half-decayed leaves or manure should be placed between the rows, coming close around the plants, leaving the crown or heart uncovered. This mulching prevents the plants from being drawn

out and weakened, or destroyed by freezing and thawing in winter. We have sometimes covered the entire beds, plants and all, with newly fallen leaves; and by raking them off early in spring, the plants came out in fine order. In the same way we have covered with clean wheat straw, and found it answer well. In all the northern and western States, some winter protection is of great service, although not indispensable. In field culture, the earth might be plowed up to the plants, as is done with nursery trees, in such a manner as to afford considerable protection against the action of frost on the roots.

As soon as the fruit begins to attain its full size, and approach maturity, the spaces between the rows, which up to this time have been under clean culture, should be covered with straw, litter, or moss. This will serve the double purpose of keeping the fruit clean and retaining the moisture in the soil. When copious supplies of water are to be applied, which should be always done when practicable, stable litter is a good mulching, as the water poured on it carries down with it to the roots of the plants the fertilizing materials which it contains.

The application of water in abundance we must again recommend to all who want the finest fruit. Rains are very good, but they can not be relied upon, and they always deprive the fruit of its flavor, while artificial waterings do not. On this account the French gardeners say that the Strawberry "prefers water from the well to water from the clouds." It is supposed that the electricity which pervades the atmosphere during our summer rains, affect the flavor of the fruit.

When the crop has been gathered, the mulching material between the rows should be removed, and the ground be forked over, so that if plants are wanted to form a new plantation, their growth will be encouraged. The same plants should not be relied upon for more than *two* crops. The labor of making a new bed, save the trenching of the soil, is no more than that of planting a plot of cabbages.

As to the season for planting, we would recommend the spring for large plantations, because then there is comparatively no risk of failure. The amateur, however, who wishes only to plant a bed in his garden, may do it at any time that he can procure good plants. If the growth of runners is encouraged in July, after the fruit is gathered, good well-rooted runners may be had about the first of September, or it may be sooner. The young plants nearest the parent plant should always be chosen, if possible. In planting during the month of August or September, rainy weather should be chosen, if possible; but it may be safely done even in a *dry* time, by using water freely. Water the plants well before taking them up, as it injures the roots very much to draw them out of dry ground; then water the soil thoroughly where they are to be set, before planting. A sprinkling will be of no use; it must go down deep, as a heavy rain would. Set the plants in the evening, and shade them a few days with boards set on edge, forming a sort of roof over them. Mulch them, too, with short litter; and it will be well, if the plants be large, to remove some of the lower and larger leaves. Planting can be done safely in spring any time until the plants are in blossom—and all summer, for that matter, with proper care.

We have thus briefly sketched the principal operations in Strawberry culture; not



in regular order, it is true, but we hope so as to be understood. We are not writing a book, and can not enter into all the details with minuteness. We have said nothing of the soil, and will only remark that any good garden soil fit to produce culinary vegetables, or any good farm land fit for grain or root crops, will produce good Strawberries; but it must be deeply plowed, or trenched, say twenty inches at least, and liberally manured with well-decomposed stable manure or a good compost. The quantity of manure must vary according to the degree of natural fertility of the soil. In one case, a quantity equal to six inches deep all over the surface would not be too much; while in other cases, half that would be enough.

We would prefer not to make a Strawberry plantation twice on the same ground; but when circumstances render it inconvenient to change, rows of young plants might be set, or allowed to establish themselves from the runners, between the old rows, which can then be turned under with the spade, and will serve to enrich the ground.

Now as to varieties. On this point there is room for a great diversity of opinion, and we can not hope to name a list that will be acceptable to a very large number of persons, at least in many parts of the country. Planters must have recourse to the best experience to be found in their respective localities; in the meantime we shall express our opinion of a few varieties, and let it go for what it is worth.

It happens that in this country the greater number of our most productive varieties have but one set of the organs of fecundation. A fruitful flower must have both pistils and stamens perfectly developed. The stamens are regarded as the male organs, and the pistils the female. When a flower has well-developed pistils, but no stamens, or imperfect ones, it must be impregnated by pollen from other flowers. Where a flower has no pistils, or has imperfect ones, it is utterly barren. A large number of our best American varieties—such as *Hovey's Seedling*, *Burr's New Pine*, *McAvoy's Superior*, *Moyamensing*, &c.—are wanting in stamens, and therefore foreign impregnation is necessary. In Europe this distinction is not observed to any extent, and all the English and continental varieties, as far as we know, are hermaphrodite. In this country very many of them fail from an imperfect development of the pistils, and are consequently barren, owing doubtless to the effects of climate and culture. It is not necessary that the two should be in close proximity; they are sure to get impregnated if in the same garden, as the pollen is carried about from one flower to another by insects. The beds of the different sorts may be kept entirely separate. Mixing them up is a bad way, as the one outgrows and overruns the other, and they become so confused that nothing can be done with them. On this account many have grown tired of keeping up the distinction, and have resolved to cultivate hermaphrodite sorts only.

The following varieties are the best on the long list of those we have tested on our own grounds:

PISTILLATE.—*Burr's New Pine*, *Jenny's Seedling*, *McAvoy's Superior*, *Hovey's Seedling*, *Moyamensing*, *Monroe Scarlet*, and *Crimson Cone*. The finest flavored variety among these, is *Burr's New Pine*; the largest, *Hovey's Seedling*; and the finest and best for market, *Jenny's Seedling* and *Crimson Cone*. *Hovey's Seedling*,



in Western New York, and in many parts of the west, is a very moderate, and in many cases a poor bearer. We have had no crop so heavy the past season (when all bore well) as on the *Monroe Scarlet*.

STAMINATE, OR HERMAPHRODITE. — *Large Early Scarlet*, *Walker's Seedling*, *Iowa*, *Boston Pine*, and *Genesee*. All these may be grown successfully for market, and are good without being first rate in flavor. We think much more of *Walker's Seedling* now than we did last season. It is very hardy, and a great bearer. It appears to be a seedling from the *Black Prince*. The *Boston Pine* is the most uncertain on the whole list; without good soil and culture, it fails entirely.

Beside the above list, we would recommend to amateurs, who are willing to bestow thorough cultivation and care on their plants, the *British Queen*, which, when well grown, surpasses in size, beauty, and excellence, any we have named. The *Bicton Pine* — a large and beautiful white variety, which ripens late. We have had a fine crop of it this season, although our plants being set last year were seriously injured last winter. Like all the foreign sorts, it needs protection, and a deep, rich soil, with abundant moisture. The *Wood Strawberries* — red and white — bear most profusely in all places, and last a long time; beside, they part freely from the calyx, and are therefore easily and rapidly picked, and their flavor is rich and agreeable to most people. In addition to these we must mention the *Bush Alpine* (having no runners) — perpetual bearers, if kept liberally supplied with moisture. They deserve much more extensive cultivation than they now receive. With their assistance, we may enjoy Strawberries not one month only, but *four* months.

## GARDENING GOSSIP FROM ENGLAND.

BY THOS. RIVERS, SAWBRIDGEWORTH, ENGLAND.

I ALWAYS read the pleasant pages of your *Horticulturist* with much satisfaction, and have often thought I would constitute myself your English correspondent; not that I can give you much news, unless it is about our well-known English subject, the weather, still, as I fully believe there are many of your readers still interested in the "old country," I will occasionally, with permission, give you a little gossip.

Our spring commenced this year toward the end of February, and all through March and April the weather was bright, sunny, and delightful — quite a poet's spring. On the 25th of the latter month, a sudden severe frost paid us a visit; the thermometer in all the counties around London descended to 24° and 25°; and all was desolate. The Pears and Plums had set a prodigious crop of fruit — never was anything seen like it — showing how favorable bright, cold, dry weather is for the blossoming and setting of fruit, — for previous to this severe frost the nights had been cold, with two, three, and four degrees of frost, but they were dry and dewless. The spring had been so fine and sunny, that Fig trees, Oaks, and many other late-leaving trees, were full of young foliage. So much were they injured and retarded by the frost,

that at this present time (June 12) they are not so much advanced as they were then. For the last seven years we have had these visitations, so that we begin to think we are never again to have an abundant fruit season. I have industriously raised from seed, and imported all the new Pears, and really did hope to be able this season to give to the world a few anecdotes of new Pears; one nicely sheltered square of trees, two hundred sorts, all *quite new*, gave me great delight, as they were full of fruit: but all are gone.

I had some fine fruit of the *Beurre Clairgeau* sent to me last December. It reminded me much of *Beurre Bosc*, being nearly of the same color, but larger and handsomer. In the firmness of its flesh it was also like that fine Pear, being *scarcely* melting. Its flavor was very peculiar—unlike any Pear I ever tasted; but this may have been from its having been packed for a fortnight; yet other Pears packed in the same box had no peculiarity, so that it must be in the Pear itself. It was not exactly disagreeable, and it is quite possible, such is the variation of taste, that it may prove very agreeable to some palates.

I have not seen the Pear *Prevost* noticed in your journal. This is one of the hardest and handsomest of the new Pears, of moderate size, and a prodigious bearer. Buds inserted in Quince stocks in August, 1852, bore clusters of fruit in 1853. This I have never seen in any other Pear. It keeps well; I have at this moment some sound fruit in my cellar; but, like all the very late Pears (or it may have been our cold season last year), it is scarcely half melting, and its flavor is musky.

*Laure de Glymes* is another *very* hardy Pear, its fruit very handsome, ripening in September and October; but it is only so-so, instead of being "*exquis*," as stated by M. BIVORT.

Now I am upon Pears, let me advise your amateurs to keep the pips of every sort they sow, named and distinct; it is quite interesting to observe the different races, and how they adhere to the characteristics of their parents. In this way I have raised seedlings from our *Ne plus Meuris* [this sort does not appear to be known on the continent, as *Beurre d'Anjou* there bears this name; and by the way, ours is the best very late Pear yet known;] which in habit are exactly like their parent, and some of them have borne fruit of the same exact resemblance, only *they were not so good*, and would not keep. According to the theory of VAN MONS—for it is one of his seedlings—I ought to have had something better than its parent; and so keep on progressing, by raising seedlings from seedlings, till perfection in keeping, size, and flavor, is attained. How pleasant it would be if we could thus, by perseverance, obtain Pears as big as Pumpkins, and keeping seven years. My seedlings from *Beurre d'Arenberg*, *Passe Colmar*, and some others, nearly all have the habits of their parents in their leaves and shoots; but I observe here and there a plant which diverges in having thorny, vigorous shoots, and large leaves. These give me hope. It appears to me—and I am no chicken in horticulture—that in raising seedling flowers and fruits, nature allows us to attain a certain point of perfection, and then retrogrades. Some years ago I raised some seedlings from *Hacon's Incomparable* Pear, from the original tree which I knew to be a seedling raised in the memory of persons then living. As

this sort is pendulous in its growth, and its shoots inclined to canker, I hoped to raise a better grower, with fruit at least equal to its parent. The seedlings bore fruit large, yellow, and I think the handsomest Pears I ever saw. Instead, however, of keeping till the end of December, and being buttery and delicious (for in England this is a *very* fine Pear), they ripened in October, and were so execrable in flavor as to be entirely uneatable. Again, if seedlings are raised from the *Geant des Batailles* Rose (and we all know how desirable a Rose of the size and form of *La Reine* would be with the color of the *Geant*), the seedlings in almost all cases prove inferior to the parent. Perhaps out of 1000 one or two, or three, may be found pretty good, or indeed very good, but no improvement on the parent—no *La Reine* with the dazzling scarlet of the *Geant*. The old dame, Nature, seems to step in and say, “Gentlemen, I have allowed you to go far enough in this instance; try your hand on something else.” Still, we ought to persevere; for new Roses and new Pears will now and then reward the grower. They are generally the offspring of chance, and amply repay him for years of toil and trouble. But then, perseverance in gardening is *not* toil, and disappointment is *not* trouble; the latter is merely an incentive to “try again.”

The time is rapidly approaching when we shall expect more from our Pear trees than we do at present; we shall not be contented simply with a good Pear, but the tree must be hardy, a free grower, and, above all, inclined to form a handsome pyramid—an ornament to our gardens, as well as useful. We must not stop till this is attained. At present, the grandest tree of all Pears for a pyramid is the *Vicar of Winkfield*. It is really a superb ornament, either for the lawn or kitchen garden, both in spring when in bloom, and in summer when covered with its magnificent-looking fruit. I allude to it only on the Quince stock; on the Pear stock I have never seen it grown so vigorously, or with such uniformity. Here its fruit is only fit for the kitchen, as it is vapid and deficient in flavor. The following varieties, all first rate Pears, may also occupy places either on the lawn or the dressed kitchen garden, as they all form very handsome pyramids: *Louise Bonne de Jersey*, *Zephirin Gregoire*, *Conseiller Ranwez*, *Alexandrine Lambre*, *Baronne de Mello*, *Beurre d'Aremberg*, *Doyenne Robin*, *White Doyenne*, *Grey Doyenne*, and *Beurre Hardy*. To those who delight in cultivating handsome pyramids, these will give much pleasure.

There is another way of cultivating Pear trees on Quince stocks in gardens—a sort of rough, old-fashioned, careless method, just the sort of gardening that suits those who have neither time nor inclination to pinch, and prune, and train pyramids—and that is, to make them into bushes. This, although I have called it some ugly names, is with many Pears, and more particularly such as bear very large fruit, a very interesting mode of culture, particularly in gardens exposed to winds. To form these bushes, you have only to cut off the top of a tree, to within three feet of the ground, that has been formed into as much of the pyramidal shape as it will take—for such sorts as *Beurre Diel*, *Beurre d'Amalis*, *Doyenne Boussock*, *Beurre Giffart*, *Beurre Langelier*, *Duchesse d'Orleans*, *Winter Nelis*, *Nouveau Poiteau*, *Triomphe de Jodoigne*, and many other good Pears, do not take the pyramidal form naturally, but they form fine bushes. All they require is to keep them from becoming crowded



with wood, and to shorten their young shoots to within eight or ten inches of their base in August.

But my method of culture is still more simple, for *my* trees require little or no pruning, and the method will just suit mechanical gardeners, *i. e.*, those lovers of a good Pear who do not wish to have the trouble to think whether a shoot is to be taken out or left in, but who can spare time and mind enough to direct their trees to be taken up and replanted—for I simply do this, *i. e.*, about the first week in November a trench is dug around the tree, and it is lifted carefully with all the earth possible adhering to its roots, and then replanted in the same hole. If the soil be rich, it will require no assistance; but if it be poor, three or four shovelfuls of some light rich compost may be given to each tree. Some mulch on the surface around the tree will also do good. After two or three removals these Pear bushes become compact and sturdy in their growth, and their roots so matted that they lift with a ball like a Rhododendron, and bear fruit the season after removal just as if they had not been touched; the only effect perceptible is the moderate growth the trees make, so that they are kept in a compact, bushlike form, easily protected from frost in spring by throwing a net or a sheet over them, and also from the ravages of birds in autumn. By the way, has this biennial autumnal removal ever been tried as a remedy for your black blight, which I think I have read is brought on in some parts of your country by over-luxuriance? If not, pray try it. These Pear bushes require about the same room as full sized Gooseberry bushes.

Have I not read, in your pomological works, that with you the Apricot is difficult to cultivate in the open air? This has also always been the case in Devonshire, the mildest climate in England, owing to the trees becoming excited early in spring, and the blossoms becoming frosted. They now grow them in orchard-houses with great success. Can not you do likewise? They may be grown as bushes, or even half standards, planted in the borders or in large pots. If planted in the borders, and inclined to grow too rapidly, biennial removal will make all right.

It is quite refreshing to see the ardor with which pomological knowledge is sought in your country. It makes one quite curious and almost desirous to go over to you, only you have so much sunshine and so few clouds, so much frost and so little rain, that one would lack moisture in old age. Pomology in England is at a low ebb. There seems a sort of self-sufficiency in our best gardeners that quite keeps enterprise down; for they show the finest fruit in the world from the gardens of our lords and dukes, and then say, "What do you want more than this?" True enough, nothing can be finer; but then, to what a small class is it confined. Now I wish to see every cottager's garden full of good fruit trees. In your country, a large class of active wealthy men seem to enter into the practice of pomology with youthful vigor; and the results of your numerous and well-arranged meetings must be highly favorable to the health and wealth of your community, for the pursuit brings both. We seem here, as regards pomology, to be like an old English country gentleman living on his estate, who pooh-poohs! all active improvement because his garden gives him all he wants, and because he has fine *Brown Beurre* and *Crassane* Pears from his walls,

despises all new and hardy sorts. I am sometimes inclined to think that I am considered to be a sort of half-wild enthusiast, because I take a warm interest in all that appertains to fruits, and am with others endeavoring to form a pomological society — *the only one in England*; and I think it very probable we shall not be able to carry out our idea, and I believe solely from a sort of John Bullish self-sufficiency which, as has happened in other matters, I trust will be cured by your activity shaming us into a like course.

There are a few, very few, good new Roses blooming this season. The Tea-scented Rose *Gloire de Dijon* is really a fine Rose, with a vigorous habit and flowers of great beauty, like those of *Souvenir de la Malmaison* with the fawn color of *Safrano*. *Auguste Vacher* is also a new fawn-colored Tea Rose, like *Ophire* (Noisette), and its flowers are, like that Rose, not regular in their shape. *La Quintinie* is a grand new Bourbon Rose with finely-shaped flowers of a rich crimson velvet. It is not, however, a vigorous grower — and this appears to me now a most essential quality; for, with Roses as with Pears, we must have only such varieties as form vigorous, healthy plants. In that favorite family, the Hybrid Perpetuals, *Jules Margottin* takes the first rank. It is like our old favorite *Brennus*, and as vigorous, with perpetual flowers, which it gives most freely all the autumn. *Sir John Franklin* and *Gloire de la France* are also two fine crimson Roses of first rate quality. *Colonel du Rougemont* is a large edition of *Baronne Prevost* — a grand Rose. *Madam Damage* is also a very good variety, resembling the latter in color and habit, with flowers not quite so large. There are many other new Roses sent out by LAFFAY, ROBERT, and others, but they are all fudge. They are good and pretty enough, but not sufficiently distinct for English, and, I should think, American taste, as we require something more in a Rose or Pear than to be merely new.

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## A CHAPTER OF GARDENING EXPERIENCE.

BY C. H.

YOUR "Hints to Beginners," in the June number of the *Horticulturist*, induces me to state a few facts in my experience in the cultivation of flowers, &c.

Some three years since, I was totally ignorant of the beauty of flowers, as well as of the pleasures to be had in their cultivation; but having erected a cottage upon a half acre of ground, and being desirous of having it adorned somewhat, I concluded to try and cultivate a taste in the floral as well as the horticultural line. I began with a dozen Roses, that an amateur friend selected for me, of the following varieties: *Madam Laffay*, *Rivers*, *Le Roi*, *La Reine*, *Ophire*, *Phanix*, *Lamarque*, *Souvenir de la Malmaison*, *Queen of the Bourbons*, *Chromatella*, *Mrs. Bosanquet*, and *Hermosa*. With "*Buist on Roses*," and hints gathered from your magazine, I succeeded admirably the first season. My plants grew finely and bloomed freely during nearly the whole season, and were the admiration of all who passed by. The following spring I

increased my stock by adding *Jaune Desprez*, *Geant des Batailles*, *Bougere*, *Solfatara*, *La Reine des Belges*, and some others. I concluded, also, to try my success with some other flowers. I procured from a nurseryman a dozen Dahlias (his own selection), and a finer variety for so small a number I never saw. They made a growth of from four and a half to seven feet, and were full of bloom from the middle of July until the frost took them. The only trouble I had was to find stakes enough to keep them supported. Pleased with my success, I next added a bed of Tulips. These bloomed finely, and have been no trouble. Last spring I added a dozen Dwarf Chrysanthemums of various colors, the selection of which I left to the nurseryman. With these, judging from the statement of "W.," in your June number, I must have been unusually successful. The plants were received about the 10th of May, and were planted in an open border, about two feet apart. During dry weather I watered them freely, and occasionally pinched off the ends of the longest shoots. About the middle of September, not finding pots sufficiently large, I put them into common painted pails (boring the bottoms of course), and set them on the north side of my cottage for a few days, until established. They began to bloom about the middle of October, and from that time until the 10th of December were a perfect mass of bloom from the rims of the pots up. Upon several of the plants there were from 150 to 200 blossoms during the whole time. Such a magnificent display of Chrysanthemums had never been seen in our village before, and they attracted much attention. Last October I set out beds of Hyacinths, Narcissus, and Crocus. My good fortune attended me with them. The varieties were splendid, and the bloom early and fine. This year I have added to my collection a variety of Verbenas, Salvias, and Heliotropes. What success I may have with them is yet to be seen; but, judging from the past, I am confident of the future; and those of your readers who are floral "Know-nothings," as I have been, may be encouraged to try, and with every addition to their flower department will find new pleasures and enjoyment.

A word in regard to wintering Roses, having lost some by not giving them proper care. One of the best plans I have found, and of the least trouble, is to turn them down, throwing over them leaves or straw, and covering with two boards nailed together at right angles. This keeps them dry and does not exclude the air. Another is, to heel them in a cold frame, and cover slightly with straw or litter of any sort. I have lost a number of choice plants by covering with tan bark and boards—a plan which I have frequently seen recommended.

The most splendid and constant blooming Roses I have, are *Geant des Batailles*, *Jaune Desprez*, *Souvenir de la Malmaison*, *Lamarque*, and *La Reine des Belges*. I have an *Augusta* that has given a few splendid flowers this season; and if it proves hardy, it will be the greatest acquisition to the family with which I am familiar.

I notice that one of your correspondents inquires in reference to *tan*, *spent tan*, &c., as a mulching for the Strawberry. Having used it with unvarying success for the last three years, I am satisfied it is the best thing possible. I take the tan bark which has been used at tanneries (it does not matter how soon after being rejected), and cover the beds from one to two inches deep, being careful not to cover the crowns



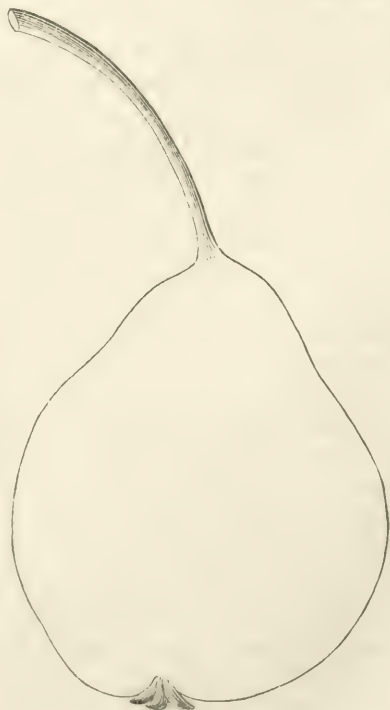
of the plants. This should be done as soon as the beds are planted, and July and August are the months for this. This mulching keeps the ground moist and cool, prevents frost from heaving out the plants in winter, and protects the fruit from dirt. Some are of opinion that there is a peculiar virtue in tan, by which the product and flavor are improved. How this may be, I know not; but more splendid fruit than I have grown, or in greater abundance, has never been seen in this vicinity. The varieties I cultivate are *McAvoy's Superior* (decidedly the best), *Longworth's Prolific*, *Burr's New Pine*, *Walker's Seedling*, and *Schneike's Pistillate*. This last I do not like; it is sour, and decays rapidly after ripening. To this collection add *Hovey's Seedling*, *Boston Pine*, *British Queen*, and *Bicton Pine*, with a few *Large Early Scarlets* for impregnating, and you have a variety good enough.

### THE ROSTIEZER PEAR.

THE *Rostiezer* Pear, which we present this month as our frontispiece, is one of the very finest foreign varieties now cultivated in this country. We think we may safely say that in its season it has no superior, though nearly equalled by the *Ott* Pear, of Philadelphia, which ripens at the same time. It is of German origin, and was first imported to Boston some twelve or fifteen years ago. Within a few years past its merits have become known, and it is now pretty widely disseminated.

In 1849 it was brought before the Pomological Society, and recommended by the General Fruit Committee among others as worthy of general cultivation. On that occasion the President, Col. WILDER, remarked that, "in the vicinity of Boston it ranks almost as high as the *Seckel*." Dr. WENDELL stated that it bore the same character at Albany; he had fruited it, and found it one of the best of Pears. Mr. WALKER said that, from the first time he had tasted it until the last, he had but one impression in regard to it—that the Pear was among the very first-rate, comparing favorably with the *Seckel* as one of the sweetest and best Pears. It was unanimously adopted as worthy of general cultivation.

We have fruited it at Rochester for three



ROSTIEZER PEAR.

or four years past, and have invariably found it of the best quality. Its only defect is its small size; but, for a table fruit, we consider it large enough.

The tree is remarkably vigorous, with strong, dark purplish-brown shoots, somewhat like the old *English Jargonelle*, which we think must be its parent. It bears abundant crops, and succeeds well on both Pear and Quince. We are inclined to think it will prove to be particularly well adapted to the Quince. Fruit—medium, or rather small, regular pyriform, often slightly necked. Stalk—about two inches long, rather slender, and inserted without any depression. Calyx—open, not sunk. Skin—yellowish-green, with a dull brownish-red cheek. Flesh—somewhat coarse, but-tery, melting, and high flavored. Ripe latter end of August.

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## THE SEED BUSINESS IN PHILADELPHIA.

BY J. J. S., PHILADELPHIA, PA.

THIS good old city of horticultural renown has long been the seat of a thriving and lucrative business in seeds. The venerable and excellent BARTRAM, and his neighbor, MARSHALL, in the infancy of our colonies supplied Europe with our native seeds, trees, and flowers. They dabbled, too, as their pleasant correspondence shows, a little in tortoises and snakes! The letters to their English friends and employers, as collected by Dr. DARLINGTON, forms one of the very pleasantest books of this or any age, especially to those interested in botanical subjects. I can not but wish the work accessible to every gardener, for whom BARTRAM was a model of industry, perseverance, and success. His beautiful old garden has fallen into the hands of Colonel EASTWICK, long in the employment of the Emperor of Russia in the locomotive and railroad business, and he has carefully preserved the specimens of rare trees collected by BARTRAM, taken care of the old mansion built by BARTRAM's own hands, and now a picturesque object overrun with ivy coeval with the botanist himself. No stranger who travels to our borders should omit to visit these now superb grounds, where he will find the finest specimen trees and shrubs in America. This garden, by the liberality of Colonel EASTWICK, still supplies seeds from the trees of BARTRAM's collecting from Canada to Florida. MEEHAN & SAUNDERS, of Germantown, who advertise in the June number of the *Horticulturist*, are liberally permitted to collect from this garden whatever will be valuable to horticulturists. It is something to have one's seeds from "BARTRAM's garden."

Succeeding BARTRAM and MARSHALL, our neighborhood was fortunate in possessing two intelligent and most worthy gardeners from England. DAVID LANDRETH, who had been educated as a nurseryman, settled at Philadelphia in 1784; he was shortly after joined by his brother CUTHBERT. The two, with such slender means as they could command, ultimately established themselves in business, uniting for a time to their own fond pursuit (as a resource to meet present wants) the culture of rare culinary vegetables; and to their early efforts in that way may be traced the reputation

which the Philadelphia market now sustains—unrivalled by any city in the Union. Gradually following the bent of their excellent taste and cultivated minds, they added commercial green-houses, which were the delight of the writer's youthful days. Rare plants—then how rare!—found their way, by their enterprise, to our borders, and a business in these articles was commenced which has grown to be one of national importance, and is especially successful here. I allude to the commerce in Camellias, Roses, and rarer flowering plants, no less than trees. The Landreth Nurseries have had an enviable celebrity, of which the descendants of these honorable dealers may well be proud. I can recollect when all the intelligence of Philadelphia resorted there to improve their taste and increase their collections. The whole town went out for many seasons to see the blooming of the first Multiflora Rose, the collection of Azaleas, and other valued novelties. The Maclura for a hedge plant was first introduced here, from seed brought by LEWIS & CLARK. The original fruit-bearing tree was till lately a source of millions of seeds; but, having attained the size of a large Apple tree, it is now bowed down by many a blast, but in green old age. Ornamental Magnolias, especially the *conspicua* grafted on the *acuminata*, emanated extensively from this garden, to which the most beautiful specimens of many other species of trees and shrubs may be traced. Calm and industrious and truly honest in the pursuit of their interesting business, these gentlemen lived long in the enjoyment of their just reward, and the writer is mistaken in their characters, if their career and intelligence was in the least inferior in importance to that of BARTRAM. In a rather different line, and with a better home market, they took up the ball where BARTRAM dropped it, kept it in motion, and popularized the pursuit, reaping a just recompense.

More fortunate than BARTRAM, a descendant, the son of DAVID, carried on their ever-increasing business, till competition in green-house and tree culture had so reduced the profits as to give less return than formerly. The old gentlemen had, however, not neglected to supply a growing demand for vegetable seeds, to the cultivation of which they appropriated some ten, and then twenty, and afterwards the enormous amount of thirty-five acres! "LANDRETH'S seeds" acquired a great and growing reputation; the demand soon exceeded the supply, and gradually the tree and green-house establishment had to give place to the approach of the city. The mansion house has been converted to the uses of a public school, called after the owners. The great stock of ornamental trees and shrubbery was dispersed by auction, giving a supply eagerly embraced by purchasers, which has done much to embellish our neighborhood. Laurel Hill Cemetery, now quite an arboricultural wonder for its variety and beauty of planting, as well as hundreds of other beautiful places, owes much of its ornamentation to this source. We must not omit the origin, at these great nurseries, of the Camellia *Landrethii*, an exceedingly valuable variety, which is destined to carry down to posterity the name so much respected among us. The nursery and garden grounds soon grew too small for the ever-increasing seed business; other land was procured in the neighborhood, till the vexation and difficulty became too great of collecting from distant fields the products in such demand from



home and abroad, and Mr. DAVID LANDRETH, the younger, who now became the sole proprietor of the business, determined to concentrate the whole of the processes in one spot. A most fortunate location in every respect presented, and Bloomsdale, a magnificent farm of about 250 acres, was purchased, twenty miles above Philadelphia, and near the town of Bristol, having now a front on the Delaware river of more than a mile. The ground was every way adapted to the object in view. Of suitable soil, level, and in a high state of cultivation, it was immediately turned to successful account. The fences were removed, the fine old family mansion greatly enlarged and made everything that a country gentleman could desire, with a lawn planted with all the new and old valuable trees in vogue, each with space sufficient to develop its beauties, and the seed business in America took at once a position commensurate with its value and importance. Orders from the most interior parts of India where the Englishman penetrates,\* from South America, from the West Indies and our own possessions on the shores of the Pacific, poured in with a celerity which gave no cause for regret at the costly step taken. The huge barns and granaries were soon filled and emptied; the iron warehouse at Philadelphia, with its nine floors stored with this novel merchandise, more valuable to our growing country than all the silks and haberdashery imported at the cost of millions of dollars for the adornment of our extravagant belles, groaned with the products of the farm, and with agricultural implements made under Mr. L.'s own supervision, to suit all climates, all fancies, and all pockets. Agents multiplied everywhere, till no town in America but was able to procure in its own borders this invaluable blessing of seeds true to name, and warranted sound. The little beginning with ten acres was crowned with success; the produce of two hundred and fifty acres met a welcome and healthy demand: but this too has become insufficient, and one hundred and twenty-five more adjoining acres have been added this season; and these are at once to be converted to a similar purpose. The little seed has grown to three hundred and seventy-five acres — the acorn has produced a great oak, overshadowing the country, beneath whose boughs thousands find shelter, health, and nutriment. You may now order this most important portion of your farm and garden supplies with a certainty of obtaining what you desire. You, Mr. Editor, must take the train from New York very soon which passes through Trenton, and you may ride on the rail through this paradise for more than a mile, and see nothing — not even a fence — but vegetation going profitably to seed. No thistles are gathered on this princely domain. We would rather be the useful proprietor of it, than of any "gable-ended" country villa in the land, however backed with railroad or bank stock. The noble Delaware spreads its broad waters in front; the canal to the coal regions skirts it on the rear, affording access for the manure from the city, of which thousands of cart-loads are distributed on the land annually. An hundred men, boys, and girls, are employed on the premises and in the city warehouse; some actively engaged in plowing, and cultivating, and threshing, and preparing the various products; and others engaged in the constant occupation of filling little and big paper bags with the invaluable products. The very making of these

\* The seeds ripened in our climate are greatly preferred in these countries to any produced in England.

paper envelopes is a large and separate business, employing many hands. Mr. LANDRETH and his agents supply gratuitously to their customers, an almanac, with a description of the mode of cultivating each seed, and a calendar of operations for the garden and greenhouse, which no young gardener or inexperienced amateur should be without.

I have said enough to indicate the importance and value of this apparently simple business; it is one, however, requiring the greatest intelligence, and the largest commercial experience, united with the strictest integrity. It has fallen into good hands — no better, we venture to say, will ever wield an engine so fraught with good to the human species; integrity indeed must be the first element of success in such a commerce. America is full of elements of similar success; for it is evident that in so large, so intelligent, and such an increasing population, whoever chooses, by industry, integrity, and the application of the highest intelligence, to interest a liberal public in his particular line of business, if he carry it on with the same untiring diligence as Mr. LANDRETH has done, will insure the same result. We will not stop to discriminate between the usefulness, the *nobility*, of such a pursuit as we have been endeavoring to describe, and that of the vender of *quackery*, under whatever guise. Other gentlemen have also an enviable reputation in the same line of business, but we must be allowed to state that none other has laid his foundation for success so broad and deep.

The writer is indebted for these reminiscences to his own recollections and observations. He was one of a fortunate few who lately had the pleasure to pass a day on the LANDRETH domain in company with the "Agricultural Club," an association of twelve gentlemen who meet at each other's farms alternately, to see improvements and converse on subjects connected with husbandry, — a plan highly useful, and to be commended for imitation in every neighborhood for its manifest advantages. The day was one of the most genial and agreeable of the season, and of unmingled enjoyment; of enjoyment, too, to the host, far surpassing any which the most successful conqueror can boast, who turns the land into fields of blood instead of fields of plenty.

The first fruits of the Japan Expedition have lately been received by Mr. LANDRETH, consisting of a box of seeds sent him by Commodore PERRY in return for a similar present forwarded by Mr. L. to the Japanese. From this box what "value received" may we not hope for?

Mr. L. is surrounded by a most amiable family; and it is not beyond the sphere of this brief chronicle to congratulate the public that worthy successors to his business are provided for the future.

Bloomsdale offers a feature of great interest to the lover of his own species. The farm hands are accommodated with pleasant cottages on the premises, and form among themselves a social circle for improvement in reading and for proper amusement, from which the Fourierites may take a lesson. The proprietor uses every means in his power to promote their welfare, and the little community, bound together by the ties of mutual interest, may challenge competition with any "model" attempted by so-called "reformers." Duties cheerfully performed, make happy faces; and we

were quite disposed to designate Bloomsdale as the "happy valley" from which no ICARUS is tempted to take dreamy flights of fancy, and pitch into the lake, with wounded wings. Comfort and true happiness have yet found no permanent resting-place in communities such as described by the author of the Blithedale romance.

## EVERGREEN TREES.

BY J. B. GRAY, FOREMAN TO P. MORRIS & CO., WEST CHESTER, PA.

It may not be unacceptable to such of your readers as are interested in the subject, to know how many of the new Pines and Firs stand our climate here.

Last winter was very trying to all half-hardy and tender trees and plants, on account of the severe changes of alternate freezing and thawing; and at these sudden changes the ground was not covered with snow, leaving no protection to plants. After a fine warm spell of weather in the early part of spring, we had a sudden and severe change, which injured plants more than all the winter. Our trees got through with the following success:

*Cedrus Libani*—A little browned. Somewhat tender before becoming well established, but afterward quite hardy. A splendid tree.

*Cedrus Deodara*—Some of the foliage fallen; buds uninjured. Hardy.

*Cedrus argentea*—More rapid growth than *Libani*, which it resembles. Quite hardy.

*Pinus excelsa*—Very hardy. Splendid tree, with long, silvery foliage.

*Pinus Sabiniana*—Hardy. A magnificent tree.

*Pinus ponderosa*—Hardy. Rapid growth; similar to *Pinaster*.

*Pinus maritima d' Corte*—Hardy. Most rapid growth of all evergreens.

*Pinus Lambertiana*—Hardy. Makes a fine tree.

*Pinus Gerardiana*—Our specimens were small, and with a little protection stood well.

*Pinus macrocarpa*—Hardy. Very distinct foliage, eight inches long, deep green. Desirable.

*Pinus Laricio*—Hardy. Very rapid growth.

*Pinus sylvestris*—Hardy. Very pale green.

*Pinus Montezumæ*—Slightly injured last winter, though previous winters quite hardy.

*Pinus pumilis*—Hardy.

*Pinus Cembra*—Hardy. A very compact, upright growing tree. Should have a place in every collection.

*Pinus Tæda*, *Pinea*, and *Austriaca*—All hardy

*Pinus insignis*—Killed.

*Pinus Coulteri*—Hardy. Slightly resembles *macrocarpa*.



*Pinus Hartwegii*—Of this noble evergreen the specimens were small, and, though protected, are a good deal injured. I think larger plants would stand here.

*Pinus halepensis*—Hardy. Twisted growth.

*Abies Douglasii*—Hardy. A fine tree.

*Abies Morendo* or *Smithiana*—Uninjured. A noble, drooping tree.

*Abies Menziesii*—Quite hardy.

*Abies Brunoniana*—Specimens small; protected; a good deal injured.

*Abies spectabilis*—Hardy, though protected.

*Picea Pindrow*—Uninjured.

*Picea Pinsapo*—Quite hardy. One of the handsomest of evergreens.

*Picea Webbiana*, *cephalonica*, and *nobilis*—All quite hardy.

*Picea pendula*—Hardy. Very distinct.

*Picea Pichta*—Hardy, and very desirable.

*Torreya taxifolia*—Perfectly hardy. Very handsome.

*Cupressus horizontalis*—Hardy.

*Cupressus Lambertiana* and *Goveniana*—The specimens of both were small. Uninjured, though slightly protected.

*Cupressus pendula*—Hardy. Very handsome.

*Cupressus macrocarpa*—Killed.

*Cupressus funebris*—Many would have this a Juniper, though it most evidently belongs to the Cypress. It is a most beautiful plant, and perfectly hardy.

*Cupressus torulosa*—Stood well.

*Juniperus Himalayensis*—Hardy. Very beautiful.

*Juniperus recurva*—A little browned. Desirable.

*Juniperus Bedfordiana*, *excelsa*, and *alpina*—All hardy.

*Juniperus oblonga pendula*—Hardy. One of the most graceful and handsome of small weeping trees.

*Juniperus ericoides*—Hardy. Very distinct and desirable.

*Juniperus Hibernica*, *squamata*, *prostrata*, *repens*, and *suecica*—All hardy and handsome.

*Araucaria imbricata*—Perfectly hardy. Quite distinct.

*Araucaria Braziliensis*—Tender.

*Cunninghamia sinensis*—Quite hardy. Would take the place of *Araucaria* at the north.

*Cunninghamia glauca*—Tender.

*Taxodium horizontalis*—Hardy.

*Taxodium sempervirens*—Tender.

*Cryptomeria Japonica*—On account of this tree making, while young, such rapid, succulent growth late in the season, it needs protection here while small. It is a beautiful evergreen, and I would unhesitatingly say that it will be perfectly hardy.

*Libocedrus Chiliensis*—Not tested, though beautiful and desirable.

*Taxus adpressa*—Hardy. Striking and handsome.

*Taxus Harringtonii* and *Japonica*—Specimens small. With a little protection

from the sun, they stood well. These two are very handsome, broad-leaved varieties.

*Taxus erecta* and *aurea*—Hardy.

*Taxus baccata*, *Hibernica*, *stricta*, and *pyramidalis*—All hardy and beautiful.

*Taxus elegantissima*—Hardy. The handsomest.

*Thuja filiformis*—Hardy. A very handsome small weeping tree. Desirable.

*Thuja Wareana*—Hardy.

*Thuja articulata*, *Tartarica*, *orientalis*, and *Siberica* or *plicata*—All hardy and desirable.

*Arbutus Unedo*—Stands well.

*Buxus Monorca*—A good deal browned.

*Andromeda floribunda*, *Deutzia gracilis*, and *Garrya elliptica*—All hardy and handsome.

*Buddleia Lindleyana*—Though protected from the sun, it was much injured.

*Buddleia globosa*—Stood better. I think it will prove hardy.

*Acuba Japonica*—Hardy.

*Magnolia grandiflora* and *præcox*—Quite hardy.

## THE CINERARIA.

THIS flower, in its present improved condition, is indispensable in every collection of greenhouse plants. Its season of flowering, which is the winter and early spring months, when there is a great scarcity of flowers and flowering plants, adds greatly to its value. Beside, it is very easily grown and managed, and easily hybridized, and therefore it recommends itself to amateurs who desire to stock their houses with such plants as do not require very great skill to treat them successfully. TURNER'S *Florist* for May gives a plate of four very beautiful new sorts, and accompanies it with the following article, which we transfer to our pages :

"We have this month given an illustration of four beautiful new varieties of this spring-flowering plant, and we feel assured they will become popular favorites. *Mrs. Trulove* is a striking and distinct flower; color, pure white ground, heavily tipped with dense crimson-purple, with dark purple disk. It was raised by Mr. IVERY, Nurseryman, Peckham. *Optima* and *Lady Mary Labouchere* were both raised by Mr. BOUSIE, gardener to the Right Hon. HENRY LABOUCHERE, Stoke Park, near Windsor. The former is a large, well-formed flower, clear white ground, with a medium belting of deep mazarine blue, small dark disk, and of excellent habit. The latter variety is a most constant and beautiful flower; clear white ground, with a narrow margin of deep lavender-blue, and of excellent habit. *Sir Charles Napier* was raised by Mr. CHAS. TURNER, of Slough, and is a striking variety, of dwarf habit, and a profuse bloomer; color intense dark blue and of good form.

*Sir Charles Napier*, *Mrs. Trulove*, and *Optima* have been awarded Certificates of

Merit at the National Floricultural Society, and *Lady Mary Labouchere* obtained a first-class Certificate from the same Society, as well as from the Royal South London Floricultural Society.

"Where is there a plant, during the autumn, winter, and early spring months, so gay and beautiful as the Cineraria; or which is so useful for exhibition or decorative purposes, or for the embellishment of the flower-vase or boquet? By artificial light, the colors of some of the rose, crimson, and purple varieties are extremely brilliant; while the white varieties, mingled with the preceding colors, are matchless. Add to this, that many of the kinds are deliciously fragrant, and you have nearly all the qualities which constitute a good flower. In treating of the Cineraria as a plant for exhibition, or of its value for decorative purposes (and, in the early part of the season, the plants make a fine display), we can not refrain from stating that their cultivation should be much improved, and indeed must be before they will assume their wonted standing upon our exhibition tables. But a few years back Cinerarias were but a lot of poor, starry things, with narrow, flimsy petals, and flowers supported by tall, unsightly stems; but now, thanks to the desire for improvement, the best varieties are dwarf and compact, and, when properly grown, produce perfect trusses of stout, and, in some cases, of almost perfectly-formed flowers.

"When high cultivation is aimed at, peculiar treatment (which we shall presently describe) is required to produce stout, healthy cuttings, as from such the Cineraria can only be properly grown. As the plant is now in bloom, and seedlings will be required, a few of the most esteemed varieties should be selected for that purpose, bearing in mind that those chosen must be of the best possible form, clear colors and marking, as much depends on this in producing new and first rate varieties. When this is done, some secluded place in the garden should be selected, to keep them entirely apart from any inferior varieties, from which the bees would fertilize them, and produce muddy, unsightly flowers, instead of clear and well-defined colors. When the seeds are ripe, sow immediately in some shady place; and as soon as large enough, prick off thinly into pans or wide pots, and keep close for a few days, until they are properly established, when they may be removed to the open air until large enough to place in single pots. Should large plants be required, they should be stopped when about two or three inches high. As soon as the seeds are gathered, the old plants should be cut down, or partly so, as in many instances the crowns of the plants rot if cut too close to the surface. Now that they are cut down, remove them to some shady place (a north border being preferable), until they throw up young shoots, when they should be potted into larger pots, in a light compost, or planted out in the open ground in a light soil, where they will give strong cuttings, and from these only can good specimens be obtained. When they have grown about an inch or two, remove the cuttings, and place them in a compost prepared for the purpose — composed of equal parts of loam, leaf-mold, and silver sand, taking care to well drain the pots with potsberds. When rooted (which will be in about a fortnight), pot off into thumbs or small 60s, in a nice light soil.

"Should first rate plants be wanted, every care will now be required to keep them



in a growing and healthy condition, to which end they should be shifted every few weeks, until they receive their final potting, which should be about January. Every care should be taken that they do not get pot-bound in the small pots, as that will throw them into a blooming state immediately.

"The compost we would recommend for exhibition purposes, and for large plants generally, would be two parts of good turfy loam, and equal parts of well-decomposed cow dung and leaf mold, with an admixture of silver or river sand. As the plants grow, take care to thin out all superfluous leaves, so as to admit the air freely and prevent mildew, which is a great pest, and which can only be removed by applying sulphur to the parts affected.

"The Cineraria should only be stopped once, as the second operation tends to produce weak growth. As soon as the shoots are long enough, tie out wide, keeping the outer branches as low as possible, and place them close to the glass, which will insure dwarf and compact plants, such as are represented in the accompanying illustration. We had nearly forgotten the drainage, which should be of rough leaf mold and potsherds mixed, which will keep the roots in a white and healthy state. Fumigate occasionally, to prevent the green fly; and water very sparingly through the winter months, increasing it as the spring advances, when weak liquid manure may occasionally be given.

"For the guidance of the amateur and those interested in the cultivation of this charming plant, we append a descriptive list of the best and most useful varieties yet sent out.

*Asmodeus* (Turner), bluish-purple self, fine habit.

*Charles Dickens* (Henderson), purplish puce, fine habit, very dwarf.

*Estelle* (Henderson), white, light purple edge, dark disc, very large.

*Electra* (Ivery), violet, yellowish-white disc, free dwarf habit.

*Formosa* (Henderson), dark violet self, light disc, very profuse.

*Kate Kearney* (Henderson), large white self, strong grower.

*Lablache* (Henderson), deep blue, dwarf habit.



THE CINERARIA.

- Lady Camoys* (Sutton), white, blue edge, dwarf, and free.  
*Lady Hume Campbell* (Henderson), clear white, with shaded blue margin.  
*Lord Stamford* (Henderson), white, azure-blue edge.  
*Loveliness* (Henderson), bright rosy lake, fine habit.  
*Mr. Sidney Herbert* (Henderson), fine large violet-purple self.  
*Mrs. Sidney Herbert* (Henderson), white, rosy-carminc edge, fine habit.  
*Mrs. Charles Kean* (Henderson), rosy-lilac, with a ring of white around the disc.  
*Mrs. Beecher Stowe* (Lochner), white, purple edge and disk, large trusses.  
*Novelty* (Henderson), azure-blue, with light disc.  
*Orlando* (Ivery), bluish-purple, with a ring of white around the disc.  
*Picturata* (Henderson), white, rosy-violet edge, good form and habit.  
*Prima Donna* (Henderson), blue self, dwarf, good form.  
*Prince Arthur* (Henderson), scarlet-crimson self, very fine.  
*Rosalind* (Henderson), in the way of *Lady Hume Campbell*, with a pink tinge in the margin.  
*Rosy Morn* (Henderson), white, broad rosy-crimson edge, large, and free.  
*Scottish Chieftain* (Sievwright), white, deep violet edge, fine.  
*Teddington* (Ivery), light purple self, dwarf and free.'

## CONSERVATORIES.\*

THE erection of conservatories may be considered the highest grade in horticultural architecture; in them elegance of design must be blended with cultural utility—architecture becomes the associate of horticulture. It is difficult to draw the line between the conservatory and the green-house—both are conservative in their principles. We must be content to take them according to the usual acceptation, and consider the former as differing from the latter in being larger in size, and having the plants or trees planted in prepared borders, instead of their being grown in pots and set upon stages as they are in the latter. Conservatories are either tropical or extra-tropical. In the former, the plants of India and the tropics are cultivated; while, in the latter, those brought from more temperate countries are kept. The situation of the conservatory may be on the lawn or in the flower garden, but not in the kitchen or fruit garden; and in such situations it should be a detached building, and glass on all sides. It is often also attached to the mansion, and forming part of it, as at the Deepdene in Surrey, and the Grange in Hampshire, to both of which highly architectural residences the conservatory forms a useful and appropriate appendage. They are often detached, as at Alton Towers, Sion House, the large one at Chatsworth, that at Dalkeith, and others. In style they vary like other buildings; but they should always be, particularly if attached to the mansion, of the same style of architecture. This rule is, however, not always attended to; for that at Sion House, designed by

\* From *M'Intosh's Book of the Garden*.

FOWLER, is in the Italian style, that at Alton Towers in the Grecian or Roman, and that at Chatsworth of no particular style whatever. There is, however, attached to that princely residence a large and excellent conservatory, quite in accordance with our views, as forming part, as it were, of the house.

Architecturally speaking, there is no impropriety in this; but, horticulturally speaking, a very great deal. In such cases it were better to place the conservatory at the very extremity of the buildings, and to connect it with the mansion by a glass corridor of a height and in a corresponding style with the conservatory's elevation. This would produce the architectural effect wished for; and the conservatory, extending beyond the line of front elevation, and placed rather in rear of it, would not mar the effect, as it would be considered an independent building. This corridor should have its roof fixed, and the front windows movable, so that they might be taken away during summer, if desirable. The wall of the corridor should be covered with Camellias, Oranges, and similar hardy evergreen plants, planted in the soil under the floor, which should be covered with polished pavement or encaustic tiles. This corridor would form, as it were, a long narrow conservatory when viewed from the living-room, with which it should be connected, and doubtless would, even when seen in perspective, have a less grand and imposing effect than a broader and more spacious structure; but it would be calculated to afford a great amount of enjoyment to the lover of plants, as well as great variety in passing along it toward the conservatory. It would also offer an excellent means for taking exercise in bad weather, and also become an interesting promenade at all times. There is no necessity that such a corridor should be carried its whole length in a direct line—it may recede and project according to the breaks in the building; and from the conservatory it may be continued to the stables, or to any other place of usual resort.



Fig. 1.

The conservatory at the Grange, of which fig. 1 is an internal view, and fig. 2 a cross section, was built from the designs of C. R. COCKERELL, Esq., who, at the same time, greatly improved the mansion. It is in the Grecian style, and is 70 feet in



length by 46 feet in breadth, and 21 feet high. We do not introduce this house as a novelty, but as being one of the best conservatories we have seen. Its proportions are good, its connection with the mansion enjoyable, its details faultless, and, either as a conservatory attached to a mansion, or as standing detached on the lawn, we consider it a model; of course we would, in the latter case, substitute glass for the opaque wall that connects it with the mansion. Two beds of prepared soil, each  $15\frac{1}{2}$  feet wide, are planted with suitable plants; a walk 6 feet 6 inches broad passes down the center, and one of 4 feet 9 inches passes along the back and front sides. Along the back wall is a border 18 inches broad, in which climbing

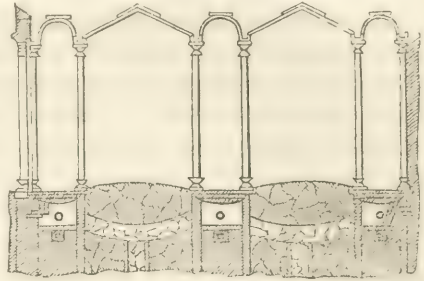


Fig. 2.



plants are grown and trained to a wire trellis to cover the back wall. At each pilaster in the front and ends, also, there is a prepared border, in which the choicer kinds of climbing plants are planted and trained up the iron columns (fig. 3) which face the pilasters. A glass door opens into conservatory from Lady ASHBURTON'S private apartments; and the principal entrance, from the spacious terrace without, leads through a vestibule in which large specimen plants in ornamental tubs, boxes, and pots, stand.

Fig. 3. In the recesses of the windows, between the pilasters, stands 7 inches high are placed, upon which small plants while in bloom are set. "Under these stands are the ventilators, which admit the heated air and steam together or separately, as may be desired, into the house. The water which falls from the roof is conducted through iron columns, fig. 4, which support the roof, into a large tank under the portico, and brought up again by a forcing-pump for the supply of the house."

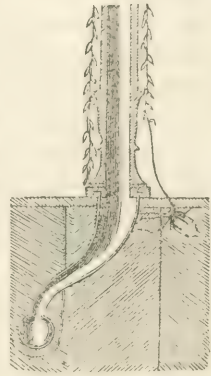


Fig. 4.

Those parts of the roof immediately over the walks are covered with double plates of iron enclosing a body of air, to prevent the escape of heat; and over these are neat iron gratings, so that any one may walk along to repair the glass, paint, &c. Ventilation is effected by opening the windows in front or at the ends, and by letting down the top roof sashes. It is heated by a combination of Sylvester's hot-air stove and steam placed in chambers under the floors. From the manner in which the roof of this house is constructed, it will readily be understood that any extent of area may be enclosed; and, in this respect, it approaches very closely to the more recently invented ridge-and-furrow roof. In the latter, no doubt, half the number of columns would suffice, both for supporting the roof, and also for taking away the rain water; but the number of these is no disadvantage, as climbing plants constitute so large a

portion of conservatory decoration, and as, for want of such conveniences to train them to, they are much less cultivated than they deserve; for among them some of the most beautiful and profuse bloomers are to be found. A further use to which these might be put, in the case of a tropical conservatory, might be to use each alternate column for taking away the rain water, and to make the others the means of heating the atmosphere, the hot water ascending up the center of the column, and descending down the sides. The heat, by this means, would be radiated to all parts of the house. The conducting pipes, both for the flow of the hot water and its return toward the boiler, should be placed under the walks, in a detached chamber, and, from these pipes, branch ones might be carried under the beds to afford bottom heat when required. These could easily be regulated by proper stopcocks placed on the mains, and could be reached by having ornamental brass ventilators fixed in the floor, and made to open sufficiently to admit a turncock key for the purpose of turning off or on the circulation to the beds under the plants. The branch pipes should be laid among the drainage, and not in the soil of the border. Such beds might also be very efficiently heated by forming brick-and-cement tanks under them, and supplying them either by branch nozzles from the mains that supply the columns, or by a separate set of main pipes, which would be better, as the pressure of the water in the columns would be liable to burst the tanks, unless these were made exceedingly strong. Indeed, it is always better to have separate boilers where two objects are to be served, as in such a case as this. In ornamental conservatories, such as this is, when intended for tropical plants, it will be found exceedingly useful to have elegant vases distributed through it. At times these may be occupied with single specimen plants, but their legitimate use is to act as reservoirs of hot water, to be supplied by small pipes passing up through them, and not only to give out heat by radiation from their sides, but vapor from their tops. Vases, however, for this purpose, should be metallic, as giving off heat more rapidly than stone, composition, or earthenware; and care should be taken that they associate with the style of architecture of the house.

In defining wherein the conservatory differs from the green-house, we have said above that, in the former, the plants or trees are planted out in a border of prepared soil. This, however, is not absolutely necessary, nor at all times expedient. The trees or plants may be grown in large tubs, boxes, or pots; but as these are in general unsightly, they may be set in a floor sunk under the level of the walks, and elevated or lowered according to the depth of the tub, box, or pot—the space above being covered with portable panels of cast-iron grating of ornamental pattern, so as to form, when arranged, a very complete flooring. Or the boxes may be plunged, or covered with stones, flints, brickbats, coarse gravel, &c., to within a few inches of the floor level, and finished off with a covering of clean gravel, moss frequently renewed, or any other similar contrivance, to hide the cases in which the trees are planted—leaving, however, the surface of the soil exposed to view, for the purpose of watering and for the admission of air to their roots. By these latter means they will appear as if planted out in the general effect, but, at the same time, be capable of removal when fresh arrangements are deemed expedient, or of being taken to some other

house in the event of sickness, or totally removed to give room to others more valuable. When the stronger and more robust-growing plants are planted in a bed of prepared soil, which is in general, in conservatories, made too rich and too deep, they outgrow all bounds; even the house itself is not sufficient to contain them. They injure or destroy their less vigorous, and, very often, more valuable neighbors; and, after a year or two, they themselves have to be cut out and thrown away, after having destroyed all around them, by overshadowing them, and robbing them of their share of nourishment at the roots. By confining them to large tubs, boxes, or pots, the latter of these evils is completely remedied, their extra luxuriance is checked, a disposition to produce more flowers, in proportion to their size, is brought on; and often, in summer, some of the more hardy may be set out of doors, to give breathing room, as it were, to the others; and when the house becomes too much crowded, the duplicates, or those least interesting to the proprietor, may be removed altogether, and disposed of in a variety of ways. It is quite absurd in this country to attempt to grow the trees of the tropics, or even of extra-tropical countries, to anything like their natural size. Who would be so bold, let us only ask, as to construct a house in which a single plant of *Araucaria excelsa* could develop itself to *even half* its natural size?—or who would find accommodation for a full-grown tree of *Adansonia digitata*, the very trunk of which, if we are to believe travelers, is equal to the diameter of almost the largest glass-house built in Europe? As it is therefore quite impossible for us to exhibit the trees, and, indeed, many even of the herbaceous plants of distant countries, of their full natural size, let us be content to raise them as it were by scale, and, by good cultivation and proper accommodation, cause them to develop their natural character somewhat diminished from the original in dimensions.





## Foreign Notices.

**GREAT EXHIBITION IN RUSSIA.**—That system of holding great public meetings for the purpose of exhibiting Horticultural produce, which originated more than thirty years ago with the Horticultural Society of London, after crossing the Atlantic, and spreading through all the more civilized Continental States, has at length reached Russia. It appears that in the year 1850 the first meeting in that country was held at St. Petersburg by the Imperial Economical Society, under the presidency of the Prince Duke of Oldenburg and Prince Basil Dolgorouky, on which occasion prizes were distributed to the amount of something more than 10,000 roubles, (1,600*l.*). Since that time these assemblages seem to have become fashionable, for we hear of one at Tiflis, formed by Prince Woronzoff; and of another at Moscow, in 1853. An account has been given by M. Masson, from whose report we collect the following interesting facts:

The exhibition in question lasted for a fortnight; on every alternate day it was opened gratuitously, on the others admission was obtained by payment. Each free day witnessed the presence of from 30,000 to 35,000 visitors. The place in which the meeting was held was the Government riding school, a building some hundred yards long. The objects of exhibition were so disposed in the interior that the visitors were able to enter at one door and depart at another, inspecting every thing in their passage without ever passing twice over the same ground. The exhibition was classified by the inspector of the Imperial Agricultural School, and each separate division was placed in the charge of one of the pupils of the school.

Two parallel rows of tables extended from end to end of the building, and were occupied by what may be called industrial produce. In the center was placed a collection of agricultural implements, exhibiting the most rude and primitive by the side of machines of the newest and most improved construction.

In the middle of the whole stood a "monumental clock" which indicated at the same moment the hour of the day at each of the four extreme points of the vast Russian empire. This *chef d'œuvre* of clock-work was embosomed in a rich collection of exotics of various kinds, skillfully grouped and furnished by M. FIEBELMANN, one of the principal Horticulturists of Moscow. Adjoining the mass thus produced stood groups of plants from all countries, cleverly set off with Dahlias in pots. Among them were some extraordinary specimens of Strelitzias, Dracenas, Pandanus, Musa, &c., together with finely grown Orange trees, and a Sweet Bay with a single clean stem supporting a head 8 yards round. "Never," says M. Masson, "in all my travels did I behold such a magnificent specimen as this."

At the four angles of the central square, which was filled with ornamental plants, were placed four large gilt frames, each enclosing about eight square yards of space. Two of the frames contained, arranged with great taste, the most remarkable specimens of kitchen garden produce then in season; the two other frames were in like manner filled with very fine collections of fruit. Among these fruits were magnificent specimens of the beautiful transparent Apples of the Crimea, and many varieties of Pears, the size of which was surprising when it is considered that, in the climate of Moscow, the Pear tree is a greenhouse plant. These exhibitions of fruits and vegetables were the admiration of every body; and the plan, M. Masson thinks, might be advantageously introduced into France. That they were really arranged with great taste we can readily believe, when we call to mind the skill with which the Russian agricultural produce was displayed in our own Great Exhibition in Hyde Park.

The whole exhibition at Moscow was bordered by a line of fruit trees and ornamental plants, such as grow out of doors in France, but must be cased up in a Muscovite winter. Among them were Plum, Pear, and Cherry trees pruned and trained like Orange trees, and most especially

Peach and Apricot trees of an extraordinary size for plants whose roots were cramped in wooden boxes. Willows, too, were there of many kinds, clipped into round heads, and a Poplar which M. Masson, whose botany is more rusty than his gardening, calls *Populus Blagovroney*.

The reporter speaks in high terms of the excellence and variety of Muscovite vegetables, the size and beauty of which he says did honor to the skill of the Russian market gardeners, who do not suffer by comparison with those of Paris. He was particularly struck with the white and black Radishes from the Caucasus, some of which are a full yard long, and unknown in Europe.

Among the cereal grains there was a most interesting variety; and it was curious to compare the tiny Wheat of Archangel with the magnificent Corn from Bessarabia. The oleaginous plants included one called *Naret de Derbend*, the seeds of which yield an extraordinary quantity of oil. Among textile plants were exhibited a *perennial* Hemp, and a wild Siberian Flax.

The forest-tree exhibition was one of high interest. Everything was there which the Russian territory grows, even the trees of Caucasus, sent, as M. Masson slyly hints, by the military Governor of that unconquered country. Each tree seems to have been exhibited in the following manner:—1, its seeds; 2, its timber, carefully polished to bring out what carpenters call the figure; and 3, a dried branch in flower and fruit. Some similar plan was adopted with all the plants belonging to rural economy.

Among miscellaneous matters we find recorded great roots, more than three feet long, of the *Stictis tatarica*, used by Tartarian tanners under the name of Kierue, and containing 22 per cent. of its weight of pure tannin; all sorts of objects manufactured out of bark, rushes and straw, among which figured straw head-dresses, and straw boots with leather soles, said to wear very well; and finally preserved fruits, fermented liquors, specimens of earth, both arable and fit for pottery or other purposes, textile materials, wool, and silk, the latter in great abundance and of great beauty.

Such is said to have been the great exhibition at Moscow in 1853, from which we English should borrow some useful hints. It is evident that tinsel was not there allowed to displace the more precious metals.—*Gardeners' Chronicle*.

COMMEMORATIVE TREES.—In England there yet exists trees that point back to the manners of our ancestors—such as the Gospel Oaks, under whose shade our fore-fathers were accustomed to assemble to hear sermons; in the same manner as at a later date our markets and other crosses were the sites selected for religious instruction to the assembled crowd. It was at Paul's Cross that one of the brightest ornaments of our church had nearly lost his life by the exposure to rain and wind, and having recovered from his illness, in the gratitude of his heart offered to do anything which his careful nurse and landlady demanded of him, in return for her unwearied attention. She said "marry my daughter," and the divine obeyed the mandate. This anecdote is merely introduced to show at how recent a date preaching in the open air was common in England, and as we may suppose that in country places the practice of preaching under trees might have continued long after it had been discontinued in towns, there seems every probability that those venerable remains, joying in the distinction of Gospel Oaks, were in the lusty vigour of their manhood, so to speak, the identical trees selected, and thus traditionally confirming a curious phase of our history. Herne's Oak, that thousands as well as myself have made a pilgrimage to see, as is well known, is not the veritable one (it is a pity to know it), but the one that was uprooted in George III.'s time in all probability was that tree of some ghostly legend in the time of our Shakespeare, and which, owing to the merry wives' conceit, had preserved its identity almost to our own times. Nor can we forget the Mulberry planted by the bard's own hands; and it takes a vast effort to forgive its ruthless destroyer. How much pure gratification has he deprived not Englishmen alone of, but the cultivated and refined of all nations. The circumstances alluded to are of national interest; but how many thousand commemorative trees exist that are of family notoriety only? and to such most deeply interesting. A knoll upon an estate, where I have recently been employed, is called "Bunker's Hill;" and upon comparing the age of the Elm trees, with the date of the engagement, I find a very near approach to years and annual layers of woody accumulation. I will give one more instance of a family nature that I was connected



with; a friend of mine had been married to his wife 50 years; there was a gathering of sons and daughters and grandchildren, and each one assisted to plant an Oak in such a manner that the whole should ultimately form a striking group in after years. Each of these trees were known to persons on the estate by the names of the persons who assisted to plant them. It has occurred to me that persons having gardens might make them of deeper interest by the power of association, and, by way of illustration, I will relate what has occurred to myself. Some years ago I was conversing with the late Sir William Garrow upon the delight I felt in possessing any plant that was mentioned by Virgil; he said he could add to my collection by giving me a plant of Bay that was taken from his tomb. I possess the plant yet, and it slightly differs from that in common cultivation. Napoleon Willows will become in fashion again if the President maintains his friendly position with England; for everything relating to his uncle is with a large party in France at present in high estimation. The late poet laureate Wordsworth, the author of that noble poem, "The Excursion," and the "Prelude," not enough known—the author of the lyrical ballads—sent me a Laurel from Rydal Mount, which I need not say I cherish. More recently Sir Robert Inglis, with great kindness, gave me plants brought from the Holy Land—indeed from the garden at Nazareth. I mention these as proofs of the additional interest a garden may be made to afford, and how it may be made conducive to all that is ennobling and good.—*William Masters, Canterbury, in Gardener's Chronicle*

**KHASIA ORCHIDS.**—Dr. HOOKER, in his travels in the Khasia mountains, mentions *Eria*, *Cœlogyne* (Wallichii, maculata, and clata), *Cymbidium*, *Dendrobium*, *Smilax*, and other beautiful air plants, as growing at the top of the Kolleng rock, flowering profusely; and though freely exposed to the sun and wind, dews and frosts, rains and droughts, they were all fresh, bright green, and strong, under very different treatment from that which they are exposed to in the damp, unhealthy, steamy Orchid houses of our English gardens. Vol. ii, 294. "*Vanda cœrulea* grows in profusion, waving its panicles of azure flowers in the wind. As this beautiful Orchid is at present attracting great attention, from its high price, beauty, and difficulty of culture, I shall point out how totally at variance with its native habits is the cultivation thought necessary for it in England.\* The dry grassy hills which it inhabits are elevated 3,000 to 4,000 feet; the trees are small, gnarled, and very sparingly leafy, so that the *Vanda* which grows on their limbs is fully exposed to sun, rain, and wind. There is no moss or lichen on the branches with the *Vanda*, whose roots sprawl over the rough bark. The atmosphere is, on the whole, humid, and extremely so during the rains; but there is no damp heat or stagnation of the air, and at the flowering season the temperature ranges between 60° and 80°; there is much sunshine, and both air and bark are dry during the day; in July and August, during the rains, the temperature is a little higher than above, but in winter it falls much lower, and hoar-frost forms on the ground. Now this winter's cold, summer's heat, and autumn's drought, and above all, the constant free exposure to fresh air and the winds of heaven, are what, of all things, we avoid exposing our Orchids to in England. It is under these conditions, however, that all the finer Indian Orchideæ grow, of which we found *Dendrobium Farmeri*, *Dalhousianum*, *Devonianum*, &c., with *Vanda cœrulea*; whilst the most beautiful species of *Cœlogyne*, *Cymbidium*, *Bolbophyllum* and *Cypripedium* inhabit cool climates, at elevations above 4,000 feet in Khasia, and as high as 6,000 to 7,000 in Sikkim."—*Dodman, in the Gardener's Chronicle*.

\*We collected seven men's loads of this superb plant for the Royal Gardens, at Kew, but owing to unavoidable accidents and difficulties, few specimens reached England alive. A gentleman who sent his gardener with us to be shown the locality, was more successful; he sent one man's load to England on commission, and though it arrived in a very poor state, it sold for 300*l.*, the individual plants fetching prices varying from 3*l.* to 10*l.* Had all arrived alive they would have cleared 1000*l.* An active collector, with the facilities I possessed, might easily clear from 2,000*l.* to 3,000*l.*, in one season, by the sale of Khasia Orchids.



## Editor's Table.

RETRENCHMENT AMONG THE NEW YORKERS.—The *Courier and Enquirer*, of July 13th, has the following article, which indicates the beginning of a much needed reform. We rejoice at it, whether it come from necessity or choice. Hundreds of families have annually spent money enough at fashionable summer resorts, to support them a whole year in comfort and elegance in a country villa. We are glad to see a journal of such influence draw attention to the subject.

"It is admitted by all those who know, that there is much less traveling this summer than there has been for several years. There are fewer parties on their way to places of fashionable resort, or jaunting up and down for the mere sake of locomotion and thoughtless pastime. But it is equally worthy of remark that the city is more than ever deserted for the warm months, by those whom the imperative calls of business do not confine within the sound of the slumberous chimes of Trinity. These facts are significant; and their causes are worthy of consideration, because they lie deeper than the mere accident of the day, or the caprice of the hour. The change in the mode of spending the summer months results from a lack of money, and a returning disposition to listen to the dictates of common sense rather than to those of fashion.

"To those who consider the subject superficially, it may seem absurd to suppose that the comparatively small amount of money required for a summer trip could be made, by a mere stringency in the money market, an item of moment to those who have hitherto considered the outlay for such a trip a necessary part of their family expenses. And it would be an unreasonable supposition, had this expense been incurred only by those who could really afford it. But in this respect, as in all others, the families of the great majority of our merchants and professional men have been living very far beyond their means—and living thus, not for health and comfort, but for display. Their summer change of residence has been in fact but a change of their scene of ostentatious dissipation. Fashion commanded that they should be 'out of town;' and as the eclat of fashionable life was the one object of their thoughts, they must be out of town in an astonishing manner. The newspapers which make personal notice of private citizens a part of their business, must prate of their whereabouts, under the thin disguise of initial letters and stars; or they must at least have the satisfaction of knowing that they were part of the brilliant assemblages thus typographically gossipped over. Now to do this costs money—any amount you please, from five hundred to five thousand dollars a season; and the unpleasant but wholesome truth which has presented itself to many a pater familias this season is, that he cannot afford the five thousand or the five hundred dollars to do it with; or to speak more properly, that he has not either of those sums above the daily needs of his business; for he could last year have really afforded so to spend them almost as little as he can even now.

"When men live up to the extreme of an income which, though nominally large, is not the product of property accumulated and laid aside, but the mere profits of a business more or less precarious,—when upon such an income they build 'a house and a half' after the fashion of a ducal palace, and furnish it throughout in a style which would make most dukes stare with wonder at the outlay and the bad taste, it is not at all surprising that when Erie and Harlem are 'down,' it is found impossible to allow Madam and Miss and young Master to polk and

grapple the summer away at the rate of three hundred dollars a week, exclusive of extras, which may or may not be twice as much more. And thus it is that in the present condition of financial matters quite a large number of those who would have thronged the halls of Saratoga, Newport, and kindred places, stay away because they have not the money wherewith to go.

But there is another reason for the diminution of the crowds which pass the summer merely in going from place to place, or in watering-place dissipation; and that is the rapidly-growing preference of a country residence during the warmer months, if not during the whole year. Every one who has been familiar with the vicinity of New York during the last ten years, must have remarked the sudden increase in the number of villas in all directions within thirty miles of the city, during the latter half of that period. Many of these are used merely as summer residences; but most of them are occupied during the whole year. This is a good sign: it betokens health, present and future, for mind and body. It makes men better and happier to live in the country. Honest men, and plenty, there may be, who never have left this hive of bricks and mortar to go as far as Weehawken; but still there is reason in the prejudice that those who live in the country are for the most part manlier, more trustworthy, than those who live in cities. Life there certainly begets habits of greater simplicity, even in those who have wealth and social eminence. The same man who when he lived in town lavished money upon suites of rooms which glowed and flashed and fretted with gorgeous colors and gold, and who surrounded himself with all the appliances of tasteless extravagance — this man having made his home in the country, is content to live in a style which approaches if it do not attain a simple elegance. It is ever thus. The English nobleman when he leaves town for his country home, leaves with it the town air and the town splendor which so frequently sits so ill upon him. Surrounded by nature's wondrous beauties, men seem to shrink instinctively from a display of their little vanities.

"There is, however, a much larger class than that composed of those who can afford villa life, which has, and will have, few representatives at the watering places and summer resorts this season. This class is composed of people who, though ill able to afford it, may in former years have fancied it necessary to seek health and recreation at the United States or the Ocean House, but who found there literally naught but vanity and vexation of spirit. They have wisely determined that they purchased those commodities at too high a price; and now they may be found scattered in clusters of two and three families together in farm houses within half a day of the city by railroad and steamboat. The numbers who spend the summer in this way have more than trebled within the last three years; so that, to supply the need, farmers, the country round, have added rooms to their old homesteads, and by receiving boarders at a moderate price, make a comfortable addition to their yearly income,—their city inmates obtaining plenty of wholesome food, quiet, recreation, nights of sweet and unbroken rest, instead of the hurried and meagre meals, the confusion, and the exhausting dissipation of the fashionable watering places. Changes such as this are vastly for the better; and the good effects which result from them do not cease with the individuals who feel their influence immediately. If an increasing love for the calm and purifying influences of nature, and a greater disposition to seek the country for a home, should result from the present financial crisis, they will not be among the least of the benefits which it will secure.

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THE following queer set of resolutions are going the rounds of the papers, credited to the Massachusetts Horticultural Society; but we can not believe that it, or any Society composed of intelligent horticulturists, would send out under its sanction such nonsense. They read as follows:

"Whereas, it is a common custom to scrape off the outside bark of fruit and ornamental trees, and wash and plaster them with lime and other preparations, in the hope of benefitting the

trees by the destruction of parasites and insects injurious to vegetation, and of improving their general appearance, the Massachusetts Horticultural Society do hereby resolve, for reasons which have been stated, that they consider this practice of no benefit to the tree, *from its inability to affect the majority of the insects which are really injurious*; and unnecessary in the case of lichens and mosses, they being not the cause but the consequence of disease and decay; and a positive violation of the laws of vegetable physiology, and consequently an injury to all trees, but ornamental in particular, to an incalculable amount.

"Resolve 2d, That as lichens and mosses in a healthy state of the tree, are, so far as can be ascertained, no injury to the bark; but, from their varied colors and forms, one of its chiefest ornaments; any operations for their removal are to be scrupulously avoided, and reprehended.

"Resolve 3d, That as strict inquiry has shown that bark lice, woolly aphis, and some borers do lay their eggs and hatch their young upon the bark of Apples, Pears, Peaches, and Maples, near the ground, and in the forks of the branches, a gentle rubbing with some pliable but stiff wire or other brush, on the parts affected, to be followed by a washing with weak, soft or whale oil soap suds, is desirable, and will be of benefit, when a careful examination shall have shown that the eggs are deposited upon any tree in question; but that this process is unnecessary, and uneconomical, when the presence of the enemy has not been most clearly proved.

"Resolve 4th, That nature is the best and only true guide in horticultural operations; and that if we wish to equal her in the health and beauty of our plantations, we must as nearly as may be follow in her footsteps; that as she provided some trees with rough, and some with smooth bark, there can be no doubt that the cortical differences have an intimate connection with, and relation to, the vitality and economies of the tree, and we view any separation of it from the tree, or any operations on its surface having for their aim to reduce the rough bark to the smooth, or vice versa, decidedly unscientific, and unworthy improved horticulture.

"Resolve 5th, That as it has been shown that fruit trees are specially liable to be injured by a few insects, whose eggs may be removed by proper rubbing, it by no means follows that all trees are to be subjected to the same treatment; that we would most strenuously discountenance any such universal medicinal practice; that it must not be forgotten in reasoning with regard to horticultural operations, that fruit trees are sui generis, and being necessarily diseased need much more care and attention than ornamental; and as we grow the one for fruit alone, and the most of it we can get, and the other for beauty and shade, so each needs a separate culture; and as one of the most delightful charms of the ornamental tree is this very roughness of bark, with its accompanying lichens, we consider that man's taste unworthy and uncultivated who can lay a rough hand upon the tree to reduce all to one unvarying uniformity.

"Resolve 6th, That as all bark is, from its composition, open to the attacks of alkaline preparations, and as no good and sufficient reasons can be adduced for their use, and as their caustic and cement-like nature tends to destroy the tissues, and prevent a proper expansion of the bark and stem, and as they are necessarily accompanied with considerable outlay, we most sincerely hope the practice will cease.

"Resolve 7th, Although the subject of pruning has but little connection with bark culture, still, as they go hand in hand, they may not unreasonably be discussed at the same time; and while, for the reasons above stated, fruit trees need peculiar cultivation, and a certain amount of pruning, ornamental require only to be well planted and manured, and should never be touched by a pruner's hand further than to remove dead wood, and we do regard with great sorrow and regret, all those efforts made by the ignorant to trim away the beauty of the lower and hanging branches, reducing the tree, in too many cases, to a close resemblance of a bunch of brush elevated on the top of a pole.

For the Committee,

R. MORRIS COPELAND."

Here, in the first resolution, the committee is made to say, that lichens and mosses are the consequence of disease and decay; and in the second, that lichens and mosses, in a healthy state of the tree, are no injury to the bark, but "one of its chiefest ornaments."



How very consistent this is! In the first resolution they condemn washing or scraping the bark, and in the third they recommend rubbing it with a *stiff wire brush* and washing with *whale oil soap suds*. This is more consistency.

We have always believed that lichens and mosses on cultivated trees, whether useful or ornamental, betokened an unhealthy condition, generally induced by wet or ungenial soil, or careless, bad cultivation. Whatever indicates disease or debility in trees, whether in the orchard or on the lawn, can not be a precious ornament, we think. Our advice to those whose fruit or ornamental trees have become mossy, is to pay no attention to the palaver about ornament, but go about draining and renovating the soil, and then remove the moss, and wash with soap suds.

In the fourth resolution we are told that "nature is the best and only true guide in horticultural operations." Now, if every body believes this, who will carry out the advice of the committee to use "the wire brush and whale oil soap"? Does nature use any such contrivances? This talk about *nature* directing horticultural operations, is mere moonshine. The gardener and fruit grower has half his time to work in direct opposition to nature. She sends swarms of slugs, aphides, bark-lice, and caterpillars, upon his trees, and he must destroy them or see his trees destroyed. Nature sends floods and drouths, and we have to drain and irrigate; she sends high winds, and we must provide shelter. In fact, the life of the gardener is a continual struggle with nature and her varied phenomena.

Surely this committee must have been badly off for a subject to make resolutions upon. What will they do next?

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LETTER FROM MR. RIVERS.—We publish in this number an interesting letter from Mr. RIVERS, of Sawbridgeworth, England. Mr. R. suggests "biennial autumnal removal," as a remedy for the "black blight." The very worst case of blight—"fire blight," as it is called here—that we remember to have seen, was in a plantation of Pears imported the year before from France, and, of course, just in the condition that "biennial removal" would put them.

In regard to the difficulty of growing Apricots in the open air, which Mr. RIVERS supposes is occasioned by early frost, it may be well to remark, for the benefit of our English readers, that the difficulty is not so much on account of spring frosts, as the weevil, or curculio, which deposits its eggs in the young fruit, causing it to fall prematurely. This is the great enemy of our Plums and Nectarines, as well as Apricots; and we wish they were banished to the other side of the Atlantic, so that our English friends might have the privilege of studying their habits, while we enjoyed the fruit.

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MAGNIFICENT SPECIMENS OF MAGNOLIAS.—We find the following in the June number of *Hovey's Magazine*. It shows how successfully the finest Magnolias, both Chinese and American, are grown in the climate of Boston:

"MR. J. A. KENRICK'S MAGNOLIAS.—In our account of the hardy Magnolias, we inadvertently omitted to mention the fine specimens of Mr. KENRICK, which he has successfully cultivated for so many years that they are now, without exception, as a whole, the finest in New England. We did not mention them particularly, as we have given a full description of them in our previous volumes, (X, p. 251, and XV, p. 408,) as will be seen by turning to the same. We now allow Mr. KENRICK to speak for himself, simply stating that though we never saw his specimens in bloom, we have examined them at other times, and they are the finest ones to be found in any collection around Boston:

"MR. C. M. HOVEY.—*Dear Sir:* Had I known you contemplated writing an article upon the 'Hardy Magnolias' for your Magazine, I should have liked to show you some specimens which I think worthy of note, and if you can spare time, within a day or two, should be happy to show you a plant of *Soulangiana* now going out of flower, which has produced from 1500 to 2000 flowers this season,—and a plant of *conspicua* which has this season produced at least 3000 flowers, and was much admired. I supposed you were aware of their existence, but as they were not mentioned, presume you were not. The *macrophylla* also I have had in flower for twelve or fifteen years, and is one of the largest specimens in this vicinity. I have also good specimens of the *cordata* and *longifolia*, beside the more common kinds. In giving statistics, I think it proper that you should be in possession of facts relating to the finest specimens in the State. JOHN A. KENRICK.—*Newton, Mass., May 15.*"

THE MASSACHUSETTS HORTICULTURAL SOCIETY has recently adopted the report of a Committee which states that the prizes awarded to Messrs. HOVEY & Co., of Boston, for the *Boston Pear* and *Hovey Cherry* were obtained by improper means, and recommending the amendment of the laws so as to prevent such abuses in future. We are surprised that this matter should have been allowed to rest until the fruits have been widely disseminated upon the strength of prizes and committee reports. Such proceedings on the part of the most influential society in America can scarcely fail to shake the confidence of the community in all Horticultural Societies.

THE SEASON.—From the commencement of July, up to the present time, (24th,) we have had warmer, and a longer period of dry weather, than we have known for some years—no rain since the last days of June, and the thermometer up to 100 degrees in the shade, several days in succession. Vegetation, however, has suffered very little; the copious rains of June furnished a long supply. The drouth seems to be felt more particularly by the kitchen garden crops and early fruit, which will be smaller than usual. It is at such times the importance of water is realized, and people learn whether they have provided an adequate supply.

WE have received a very kind and pressing invitation to attend the meeting of the North Western Pomological Society, to be held at Burlington, Iowa, on the 26th September; but the meeting of the National Society, at Boston, during the previous week, will, we fear, prevent our attending. We have a great desire to see the Western fruits in convention, and will be at Burlington, if possible. The meeting will be highly interesting on many accounts. Every year adds much to the common stock of Western experience. If we cannot attend we shall endeavor to make arrangements for an early report.

FRUIT AT PHILADELPHIA.—Do you know that our city has become the largest in America, if not in the world? We have consolidated—that is the word—the whole county into one great city government. Philadelphia now includes a space of twenty-two miles by eleven, and contains say seventy-eight thousand acres! with a population that at the next census will far outstrip New York. I wish I could add, that with this "act" our fruit had increased; but it has done us in this respect no good whatever this season. The late snow storm and sleet destroyed nearly all our Pears and Cherries, so that there will be barely enough to make a decent exhibition. Cherries for pies are eighteen cents the pound, and very scarce. Strawberries have been fine, but only half a crop; Raspberries the same. On one hundred dwarf Pears that ought to have borne finely this year, I have just thirty-one Pears! But I still live in hope. S.

We wish you were here. We have had an overflowing abundance of all the fruits.

CLIMATE AND PRODUCTS OF CALIFORNIA.—Dr. WM. B. OSBORN, one of our subscribers, and the agent of the *Horticulturist* in Los Angeles, California, thus writes to Col. B. P. JOHNSON, Secretary of the New York State Agricultural Society. Mr. OSBORN has sent us a goodly number of subscribers, and we should be much gratified if he would occasionally give us notes of the progress of horticulture in his new home.

"I have almost forgotten what winter was. I have been from New York seven years; and here perpetual spring and summer has lost to me many of the charms of a New York winter. I feel *chilly* when I think of it—eight months fire in the house. Our horses and cattle mow and secure their own fodder without the assistance of man. Snow we can see, when we cast our eyes to the Sierra Nevada, but it is never a near neighbor. We raise here, in our little valley, the fruits of both torrid and temperate zones. In the same garden, side by side, grow the Apple and Orange, the Pear and Lime, the Peach, Fig, Olive, Grape, Luna, Pelair, Apricot, and Pomegranate. We have here a few Americans, who are doing much to improve the culture and varieties of all kinds of fruits. The native Californians still claim that their old mode of culture is superior to any *novidad* of the *extrangeros*. I have been a resident of this city since 1847, and one can not but be pleased with the changes for the better which have taken place. Some of these, it is true, have been violent; but now all is quiet, and person and property are secure. I should be pleased to exhibit some California implements at one of your State Fairs."

A NEW YORK GENTLEMAN who devotes much attention to gardening matters, writes as follows:

"I see in your last number some inquiries about mulching Strawberries with tan. Your correspondent, I think, lost his plants. He laid it on *too thick*. Three inches of tan will generally produce fermentation and burn the plants up. Not more than one inch should be used under any circumstances. The best *mulcher*, according to my experience, is a highly tempered steel rake, with prongs at least eight inches, *applied* at least once a week during the season. While on this subject, let me say to you that I am now engaged in testing all the leading varieties of Strawberries. I propose to do the thing up thoroughly; submitting them to the best treatment, and making notes daily of every thing I see. When I have finished this branch of the subject, I shall take the best kinds and submit them to various trials of manures, &c. I shall probably be occupied several years with the subject, and then I hope to be able to write the natural history of the Strawberry, as it has never been written before. I began this spring, and now have upwards of thirty varieties, having procured most of them from original sources, to insure correctness."

EXPLANATION.—I observe in the "*Chapter on Pears*," which appeared in your July number, an error caused by your correspondent's supposing that the *date* affixed to *Doyenné d'Alençon* was its "*season*" of ripening, when, in fact, in preparing that description, I intended it simply to mark the *time when it was tested*. The description was taken from a specimen which had been exhibited at the various fairs of 1852, and which had afterwards matured prematurely in the office of the Syracuse Nurseries. Being absent when the chapter referred to was made up, an opportunity was not given me to correct the error, as I was able to do conclusively, having then (March,) several unripened specimens in my possession. This correction would, of course, have spared you the necessity of pronouncing the *Doyenné d'Alençon* cultivated at the Syracuse nurseries to be "untrue," saved them from the injury of an unjust sentence, and your correspondent from the consciousness of having called it forth. The same precisely may be said in relation to the description of *Passe Tardive*, a fruit well known to be very late, and deemed at the Syracuse Nurseries so indifferent that they have not room enough to cultivate it. J. C. HANCHETT.—Syracuse, N. Y.



THE renewal of my subscription to the *Horticulturist* prompts me to express my high appreciation of its merits. Having received it since its commencement, and read each number with interest and profit, it has now become to me a necessity, and one with which I could not dispense. It is true, that some of its articles do not interest me, nor can it be expected that each article would alike interest all subscribers. If, however, any department of horticulture demands a larger share of attention from you, it is the Kitchen Garden, although I have of late noticed several valuable articles. Will not one of your correspondents, say the "OLD DIGGER," or Mr. CHORLTON, or Mr. MEEHAN, give us an article showing us how to make the most of a small garden, and when and what to plant so as to keep the ground always occupied. I have myself but just begun to learn, and I doubt not there are many of your readers, like me, who from ignorance, have unoccupied ground for much of the season, not being able so to arrange it as to have the proper succession. A list of the best varieties of the leading vegetables would be valuable.

The *Horticulturist* has lost a warm friend in the death of Judge BARCLO, and many of its readers will recollect several valuable articles furnished by him, over the signature of "B." He took especial interest in the culture of the Grape, the Strawberry, and the Pear, and had a large collection of each. He devoted to his garden all the time his arduous judicial duties would allow him. He was a careful investigator, yet ever ready to avail himself of the experience of others. He died away from his home, and during his painful illness often expressed the wish that he might once more see his garden, where he had spent so many pleasant hours—but his hopes were not realized. He died in the midst of his years and his usefulness, and his loss may well be deplored. J.—*Poughkeepsie, N. Y.*

The death of Judge BARCLO has indeed left a great blank in our list of friends and correspondents. For many years he devoted much time to his garden and orchard. He was a close and accurate observer, and always ready to communicate the results of his experience. We have received at different times, letters from various parts of the country requesting the address of "B," from persons who desired to consult him on subjects to which he had given special attention. In every case we were very kindly thanked by these persons for having afforded them a correspondence so pleasant and instructive. Yet, he was only beginning to see the results of his experiments—just about to gather the fruit of his labors.

Some years ago he had planted dwarf Pears largely, but he informed us last spring, that many failed, and he set about replacing them with standards. He expressed a great partiality for the *Buffum* and *Bartlett*. Beside fruit trees, he planted last spring many ornamental trees, shrubs, &c., and had commenced some experiments with hedges. In the midst of all these pleasant labors at home, as well as of his important public duties, he is called suddenly away; but the good that he has done remains.

LETTER FROM PITTSBURGH.—I send you the proceedings of the last two meetings of our Horticultural Board, chiefly with a view to its bearing on the Strawberry question. As you will observe, the report of last year, which condemned the *McAvoy's Superior*, is this year revised and corrected. You will bear in mind that the season here has been unusually dry, and that the berries, the measurement of which is given, did not therefore reach their full proportions. Especially was this the case with the *British Queen* and *McAvoy's* the beds of which, being distant from the hydrant, got no water, while the *Victoria* and *Buist* were watered occasionally. Taking these things into consideration, these two varieties have done well. These are perhaps the first genuine *British Queen* grown in this country,\* and give fair promise to sustain their English reputation. The variety which we call *Victoria*, was so named by one of our growers as the label was lost from the original plant imported from England. A box of them was sent

\* The *British Queen* has been grown here for the last eight or ten years, but with indifferent success.—ED.

to Mr. Brist, of Philadelphia, last season, who pronounced them the true *British Queen*. The experience of the present year, however, proves this to be a mistake, as the two plants are very dissimilar, though the berries are somewhat alike. The *Victoria* is an early berry, finely flavored, and sports a great deal, producing much of its fruit of the cock-comb shape. The fruit raised here as the *Brist's Prize* is a valuable one for market, from its large size, firmness and handsome appearance; yet it is quite tart, and not so finely flavored as several of the others. The *Biston Pine* (white,) is also raised here, and does well. It is desirable on account of its color, to embellish the table.

There has been a fine display of Strawberries here during the season, just closed. Prices ranged from 20 to 37½ cents a quart, and although a much larger crop is now raised than formerly, the demand seems to increase with the supply. I doubt whether finer Strawberries are raised in the United States than in this county.

Much greater attention is given to the culture of good fruits of all kinds than formerly. The improvement is owing in a great degree to the establishment of Horticultural Societies, and not a little to the character and efforts of your journal, the *Horticulturist*. Would that its circulation was commensurate with its merits. Our Cherry crop was almost an entire failure, owing to the late frosts. By the way, we are terribly annoyed by the slug on our Cherry and Pear trees. Is there no wholesale preventive or remedy? nothing but sprinkle, sprinkle? and must the price of these fruits continue to be "eternal vigilance"? ROBT. MCKNIGHT.

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"CHAPTER ON PEARS"—CORRECTION.—I write you to correct an error or two in the article published in the July number of the *Horticulturist*, as well as to offer a few amendments.

*Signoret* should be *Sigarel*.\*

*Belle de Bruxelles*, not identified, is the *Belle et Bonne*.

*Hosenshenk*. You say a variety of opinions exist as regards this Pear. We are aware of it, and attribute it to the fact that there are two varieties, each grown by Mr. SCHENK. Mr. SPANGLER, of Pennsylvania, writes us most *positively* on this point. One he calls, and it is known, he says, as "*Schenk's August*," which is the pear described as not so good, while the "*Hosenshenk*" he says has all the good qualities attributed to it, and is in his opinion the best Pear of its season. We have both growing side by side. There is a difference in the wood and growth; the poorer one, *Schenk's August*, being the best grower. We feel confident that the correct Pear will be very desirable.

*Doyenne d'Alençon*. If my manuscript says the season was the middle of October, and I think it did, I made an error, as it is with us a winter Pear and a very late keeper.† A. FAHNESTOCK.

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TO THE VICTIM OF HAPPY CONTENTMENT.—*Friend Atticus*—Think you the recital of the hard things of your lot, and the much work to be done, will cause me to swerve from the benevolent intentions by my kindly nature prompted? Oh, no! a western woman is not lightly turned from a difficult path. I can but feel a little astonished at your exceeding slowness in accepting my proposals. I fancied you would seize upon it as the drowning man upon a straw. I rest in quiet confidence, however, of your final decision.

Of the "gout" I must rid you, or you would accomplish little here. Receiving it in this *pro tem*. way I shouldn't shrink from, and should without doubt soon vanquish it with my hydropathic theories. Perhaps it wouldn't be *best* for *me* to take it, since this change being brought about through my instrumentality I should feel great responsibility, and wish to be particularly agile. But there is my husband—I never had the pleasure of nursing him, he is always so pro-

\* It is "*Signoret*," according to the best authorities. One catalogue, in which we do not place much confidence, has it "*Sigarelle*."

† Mr. HANCHETT's note elsewhere explains the cause of this mistake.



vokingly well. To afford me this pleasure, and relieve you, he would not object. With his fine constitution, correct habits, and my good nursing, he would soon get the better of it. The fact of your possessing this ailment is only another proof of the necessity to you of an immediate change. Your life has far too long been one of ease and luxury. Once rid of it, and it will not return to you here.

Such insinuations about my children! I almost fancy you a cold, selfish, childless bachelor. Instead of being hindrances, they would prove helps and lighteners of my pleasant labors, as well as happy participants in my enjoyments,—and good things shared are the more enjoyed. Yes, *mine* are such children as you sometimes hear of, but seldom see!

That neighborly neighbor—would I were near to look after him. What a pity you had not received and accepted my proposition prior to this unfortunate affair; then no such denouement could occur. My husband with his noble nature, and I so irresistibly fascinating, have power to render harmless every hateful, selfish propensity, in those about us. We could bind even his unkindly nature with this twofold card—our potent spells—and transform him into a gentlemanly neighbor forthwith. I'd risk his concocting any more wicked machinations. Those costs and fees now lining your lawyers' pockets—how they would help along our new home! What does one gain by going to law? You attained one little point; but the end of your losses you may not soon see, unless I come quickly to your rescue. The means already expended in prosecuting your suit would have enabled me to supply your ponds by an artesian well (if water thus obtained would suit the fastidious gills of your finny pets), and left enough to stock our conservatory. That attorney, knowing your ability, will not be so unwise as to settle this affair in a long, long time. Your neighbor doubtless needed the stream which fed your fancy ponds, to supply his water-ram for practical purposes, and deemed it not very selfish to turn the ornament of his neighbor's enjoyments to the useful of his own account.

Do you think because a Badger that I am a barbarian, and would dry my linen on your choice shrubbery? In the wildest days of our settler's life in this primitive forest, a regular Manilla line performed this part of our laundry occupations.

Your "library" will not know the fate of unappreciation or wasted fragrance, while I will leave quite a tolerable one here for you. But as you are to enjoy two years of labor, you will need only works on horticulture, floriculture, architecture, etc., with a sprinkling of other literature for recreation.

As to your pets. Afar back in the days of our youthful union, when the locks of my John Anderson were like the raven, flowers and pets, quadruped and biped, were among our delights. One little apartment of our city home was set apart for them. Here we cared for them, grafted our Cacti, budded our Roses, and propagated the usual variety of window plants. These things in our more earnest life are laid aside; not even this little room can we devote to them, or a tithe of that former leisure. But our warm outgushing affections long for the pets we loved, and shall ever hope again to gather about us.

Your favorite horse will be safe. Husband never carries a whip, except for show; love and affection are the cords by which he controls all about him. Should it rain, he would walk rather than his horse should muddy its feet or dampen its glossy coat.

If that coachman wont grease the gears, perchance I can myself;—may be it wont be the first time.

Fear not that gardener or coachman will absent themselves, or neglect their duty. I'll venture they'll serve their new mistress with a cavalier devotion of unflagging industry, and obey her slightest request. Fear not for my management. Your only dire apprehension may be that I shall so perfectly fascinate every living thing about me that they will follow me en masse to my western home.

Though no Florentine tables or statuary grace our humble home, our children would not rudely mar any more than they would gap in petrified backwoods astonishment. They are too



well informed and mentally cultivated for that. As for books, they have been brought up among them, if with no other refined surroundings; and their young minds are imbued with a proper appreciation of the value and treatment of things useful and beautiful. My choicest books, articles of bijouterie—the gifts of other days—engravings, scrap books, collections of herbals and alga, lie within reach of little hands, not sealed books or tabooed articles, but unharmed by any particular marks of spoliation and soilization.

As to the "tiles," we are not civilized enough yet to tell from experience where are best. Mr. JOHN JOHNSTON, of Geneva, N. Y., can perhaps give you more practical information.

You'll have to think again before you find any thing in your perfect home that we can't get along with, rude as you may fancy us in our backwoods retreat. From your innuendoes I mistrust you have some little inking that we should appear exceedingly brusque, staring and distraist among your elegancies. I shall have to solicit that "introduction," to prove to you what elegance and refinement can come out of Wisconsin woods, and how perfectly at ease I can tread your velvet carpets, and recline on your rose-wood and damask.

I laugh in derision at your knowing any practical definition of the word *work*—and fearing that we shall have more than we can attend to—and you not finding enough to do to keep off the gout. Neither the physical exercise, the heart work, or head work can frighten us. Your letter is so suggestive, containing so many luminous points, I can scarce dilate upon them individually; but grouping them generally, fear not to answer affirmatively. Your category of queries already propounded is well nigh sufficient to analyse my capabilities for the station I should by this change occupy. I might turn the tables, and ask you whole pages of questions and give you sheets full of hints, but I forbear. I would not wound you by questioning your talents and efficiency.

One word, however, concerning that wild flower garden I so wish to possess. You will help me to this, will you not? These lovely embellishments adorning our little prairies and extended woods, beautiful in many of their varieties as some costly exotics, are fast receding under the encroachments of civilized bipeds and quadrupeds. What a pleasant task to study the constitution and habits of their manifold species, and apportion to each that regime which will induce them to multiply and blossom in all their native luxuriance.

I make no special allusions or arrangements for *Mrs. ATTICS*. Knowing by world wide report, to say nothing of experimental knowledge, that woman is ever disinterestedly devoted, full of noble abnegation, it would seem a libel to ask if a wife were equal to any degree of self-sacrifice and renunciation, to cure a heart-sick, head-sick, or gout-sick husband.

Sundry undeferrable occupations of my life of actualities have caused this late reply to yours. *ELSIE.—Woodside, Waukesha, Wisconsin.*

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### Notices of Books, Pamphlets, &c.

**CRITICISM.**—A friend sends us the following notice of *Elliot's Fruit Book*, cut from *The Independent*, Dr. BEECHER's popular newspaper, requesting its insertion in our columns, as it touches upon some points to which our notice did not allude. We give place to it with pleasure, not for the sake of what is said of ELLIOT's book, but because it touches upon certain subjects which have an important and general bearing upon American Horticulture and Pomology. It says:—

"The respects in which this work deserves notice are:—

"1. The addition which it makes to the list of Apples and Cherries, of native sorts. We think, however, that many of them are prematurely favorites.

"2. In the science of description, Mr. ELLIOT has employed, in the chapters on the Apple and

the Pear, the characteristic and distinguishing forms of the seed and the seed-cells. This is a step in the right direction.

"3. The changes which a fruit undergoes upon different soils, and in different atmospheres is kept distinctly in view. And, though the investigation of these most interesting facts has not yet been so large and accurate as to form the basis of very thorough and reliable statements, yet a beginning is made, and Mr. ELLIOT has contributed many materials toward a department or knowledge hitherto almost unmarked.

"4. Beside these more prominent points, the reader will find many interesting facts, many suggestions, in the preliminary chapters, of each leading department of fruits.

"We should be glad to rest the matter here. But American Horticulture and Pomology suffer for lack of firm and just criticism.

"1. Mr. ELLIOT has been led to make his book cover a larger ground than was needful, except for bookseller's reasons. Had he given a monograph on Apples, or a thin volume devoted chiefly to the Apple, the Cherry, and the Pear, and as a *catalogue raisonnee*, he would have shielded himself from much criticism; but there is no advance upon DOWNING's work which justified so large an undertaking, and in a literary view it falls far below it,

"2. For Mr. ELLIOT has the unpardonable vice of *fine* writing—unpardonable in any body, and in any department of literature; but to the last degree unbecoming in a practical and scientific work; and rendered more ridiculous when attempted by persons who can not even write grammatically. Fine writing is the scrofula of literature. The only way to cure it is for the author to burn his manuscript.

"We are surprised that Mr. ELLIOT's publishers should not have urged him to entrust his MSS. to some literary hand, to comb its tangled sentences, and pluck out its artificial flowers, and gaudy tail-feathers, stuck in without taste or conscience.

"A little of this tendency is to be found in Mr. DOWNING's work. Sentimental sweetnesss are quite in place in a treatise on the beautiful, and in works treating of landscape-gardening; but the utmost frugality should be practiced in a treatise upon fruits. And if, in any degree, Mr. ELLIOT has sinned under the influence of Mr. DOWNING's genial and flowing style, it is time that the pomological world should pronounce its censure so distinctly upon such efforts, as shall create a law of propriety hereafter, otherwise we shall have books of fruit stuck all over with meretricious ornaments, like a confectioner's gewgaw temple at an absurd municipal dinner."

That "American Horticulture suffers for lack of firm and just criticism," is an undeniable truth. A notice of such a work as *Elliot's Fruit Book* should be more than a mere puff; it should point out errors and defects, as well as excellencies, for the benefit of both author and public. True, there are but few among those who are called upon to review such works, that have a sufficient degree of knowledge of the subject to take it up thoroughly, and many of those who are competent have not the requisite leisure. There are those, however, who have both leisure and ability, but are too lenient—too fearful that they might wound the sensibilities of the author, or lose his friendship, to speak out boldly in the language of "firm and just criticism." We should be one of the last to complain of this, for we have needed and enjoyed our full share of lenient and kindly criticism; but we must say that even in our own case we would prefer to see the critic just before being generous, even if it should bring upon us somewhat of mortification. Every man who sets himself up as an author must expect to have the merits of his work canvassed, and his errors and weak points brought to light: nor should he complain if treated with somewhat of severity; for nothing short of this will bring some people to a proper degree of self-appreciation. We should betimes "see ourselves as others see us." The author who complains when he is not flattered and puffed, and looks upon every one as an enemy who will venture to correct him, has a very important lesson to learn. We would be glad

to see more of the manly tone of the *Independent*. When the cause of science is concerned, the truth and the whole truth should be spoken even between personal friends. Without any reference to Mr. ELLIOT'S style of writing, whether it be *fine* or otherwise, we must express our hearty concurrence in the views advanced by the *Independent* on this subject. To lug in a series of sentimental ideas and expressions, in writing on a practical or scientific subject, is a glaring impropriety, and one that is, we regret to say, by no means uncommon. Plain matters of fact should be stated in plain, every-day language, and not be encumbered and mystified by superfluous and inappropriate ornaments, "artificial flowers and gaudy tail-feathers." There are subjects connected with horticulture which naturally call up feeling and sentiment, and these seek utterance in appropriate language, as do joy, sorrow, or any other emotion of the heart. There is "a law of propriety" in these matters, which nature herself has established, and which the exercise of a moderate share of common sense can scarcely fail to discover.

### Answers to Correspondents.

I SEND you several portions of bark taken from diseased Pear trees in my orchard, for your examination. The first appearance of the disease is very slight—quite a small brown speck. As it progresses, the bark becomes darker, and finally; occasionally it cracks open—usually running up or down the branches, seldom reaching round until badly diseased, which it finally does. The alburnum, or sap wood, now being exposed, the limb perishes in the same way as by ringing or girdling—sometimes the first year, but generally the second. (1)

On one piece of bark you will find about half of it black, the other perfectly sound. This I think is quite different from the first, and I find that it kills the limb in a short time. I dread it worse than the other, and have amputated the limbs on which I have found it, instantan. (2)

Now, sir, is this not bark-blight, and totally different from leaf-blight? I find no mention of either of them by DOWNING, THOMAS, or BAREY, and have concluded that it differs from all other kinds of blight, and is peculiar to our section of country. With a small microscope, 676 superficial measure, I have examined closely for insects, which I thought might be lodged in the bark, but found none. The trees from which the bark was cut are dwarfs, grown on the Quince, of various ages from one to six years old. They were remarkably healthy until last August, when every one of them (some 400 of 80 or 20 varieties) were attacked with fire-blight—something I had never seen before; not one variety escaped, though on some kinds it was much worse than on others. I cut off the affected parts, which were mostly the young and tender terminal shoots, and thus arrested the disease, when they threw out another growth, and before frost they appeared as healthy as before. Having sold my farm, in January, 1853, I reserved all my dwarfs, and removed them to my father's garden, a sandy soil, they having before stood in a clay soil. Was the change of soil the cause of these different forms of blight? (3) Last winter I removed them to a clay soil, and now find the first form of blight in abundance.

Now if you will point out a remedy, so that I can once more keep my trees healthy, you will do me a great favor; and as a compensation would be glad to have you turn this way in the Pear season, and if I can not present as high flavored, I know I can show you some of the weightiest fellows you have ever seen. (4)

Can you tell me where seed of the *Victoria regia* can be obtained, and the price? (5) Has it ever flowered in open ponds in the United States? (6)

Whenever you discover the best Quince for stocks for the Pear, I should like to be informed. Pomological doctors seem to differ. (7) Have you not altered your opinion since you published your *Fruit Garden*? You there speak highly of the Upright Quince. DOWNING says the common, or Apple Quince, is as good as any when once budded, being harder to bud than the Angers.

Should nurserymen be responsible for trees not properly packed for distant transportation? (8) I have lost many trees and plants, beside having to pay freight and charges, as well as first cost, on bundles and boxes sent me from your State. In some instances, all that I could find was the labels and packing material. This winter I received a lot of trees packed in three bundles. The matting was rubbed nearly off; the rats had cut nearly every root off, and most of the branches. This was perplexing, I assure you. But more of this at another time—hoping, however, you will give us an article, in the *Horticulturist*, on packing of trees and plants for distant transportation; it is a matter of importance to purchasers.

Who makes the best brass garden syringes, and garden engines? Also, prices (9) M.—Hinds Co., Miss.

(1) The pieces of bark affected with this form of blight have much of that cackered, unsound appearance, which the trees of *Van Mons Leon le Clerc* usually presents as they advance in age. We have not seen, in any other instance, any blight or canker like this from Mississippi.

(2) This bark has the appearance of being attacked with the so-called fire-blight, a small spot



appearing to be burnt or blistered. When that blight prevailed here, we frequently saw such cases. The only remedy we are at present prepared to suggest, is that of cutting off promptly as possible all affected parts.

(3) It might be the cause of the first, which is a sort of canker, induced by an unhealthy circulation. The other is, as we have said, the fire-blight under a peculiar form.

(4) What is your best Pear season? We only fear it comes too soon. If it were in December or January, we would be there. At any rate, you must let us hear all about them.

(5) Inquire of MESSRS. MEEHAN & SANDERS, of Philadelphia. See their advertisement in this journal.

(6) Not to our knowledge.

(7) The *Angers* is probably the best of all, as we stated in the *Fruit Garden* three years ago. The *Paris* or *Fontenay* stock is not much inferior, and may be even preferable for certain varieties and certain circumstances. The *Upright* lacks sufficient vigor and hardiness, but it makes a good stock for the *Orange*, *Portugal*, and other Quinces.

(8) Nurserymen should suffer the consequences of bad packing, unless they pack as ordered by the purchaser. Packing is not the least important part of the nursery business. Those who do not understand packing, and have not the necessary facilities for doing it, should not meddle with distant trade; if they do, they will certainly get into trouble, and get others in with them.

(9) We have a very good garden engine, made by Messrs. DOWNS & CO., of Seneca Falls, N. Y., for about \$25. We do not know who makes brass syringes. R. L. ALLEN, of New York, keeps a general assortment of garden implements.

I HAVE a garden on the bank of the river St. Clair, which is planted with fruit trees; the soil is principally of a peaty, vegetable nature, and when I got it, six years ago, was in a very wet, marshy state, caused by the water coming through the bank from the land back, but by under-draining it is now quite dry and in such seasons as the last, rather much so. I have carted on to it a quantity of sand and manured it with stable manure and lime. It has been under cultivation five years, the most of which time it has been planted with Apple, Pear and Plum trees, which thrive very well were it not for a blight which has attacked them, the manner of which is as follows:—In the month of June, when they are growing rapidly, all at once the leaves become black as if they are burnt, the wood dries up, and the tree dies. I have this season, as well as formerly, lost several young Pear trees by it. The Plums do not seem affected by it, but the Pears and Apples are very much so. In the nursery rows some have all this year's wood blackened, some only part of it, while others have only some of the leaves touched, and others, again, not hurt at all. The blight is not confined to any particular kind or size, nor any section of the low ground—sometimes the tallest are taken, and sometimes the smallest. The blight comes instantaneously on them, so that in 24 hours or less a fine, growing, healthy tree, or a portion of it, will be transformed into a black unsightly mass.

I have examined different authors on the subject and cannot determine whether it is fire-blight or not. You would oblige me by giving your opinion of it in the next number of the *Horticulturist*, and let me know if anything can be done to prevent it.

I have had Swedish Turnips on a part of the land for two years, and the leaves are also affected at a later period of the year by becoming yellow and withered, when the turnips stop growing. Is it caused by the nature of the soil, or is it something they require? On the top of the bank, where it is a dry shifting sand, the trees are not so liable to this blight, as on the low mucky ground. A. YOUNG.—*Port Sarnia, C. W.*

As near as we can judge from your description, the malady complained of is the fire-blight, so-called. It is generally believed that trees growing on low, rich, damp soil, are more susceptible to the attacks of this blight than those on dryer and poorer soils. We have met with no proofs of this, however, in our own experience. We can suggest no remedy but that of promptly cutting away the affected part down to the sound wood, in all cases where it is discovered before the whole tree is affected. When this is the case, destroy it immediately, root and branch.

THERE has appeared on my Elm trees a species of insect, which causes a hollow excrescence on the leaf, with an aperture on the under side leading into it. This hollow chamber is filled with purple colored lice. If you know of a cure or preventive, you will confer a favor by making it known through the *Horticulturist*. I inclose you a specimen. GEO. J. HUGHES.—*Chatham, Pa.*

The excrescence is the work of a species of gall-fly. The only remedy we know, is to destroy these galls or excrescences before the young insects escape.

I wish to make a statement or two, and ask a few questions, requesting answers for my own and others benefit:

We have this season lost many of our Pear buds on the *Angers Quince*. They were set the early part of September last, on thrifty stocks, went into winter quarters in fine condition, and appeared to be all right, until about the 10th of March, when I noticed the tops of some of the Quinces showed signs of shrinking half way down. About the 15th, the mulching was partially removed, as roots began to strike out above the ground. On the 18th the weather came off very cold, and continued to freeze for three days in succession; the thermometer part of the time was down to 18°. About this time I noticed a change in the appearance of some of the buds, they becoming dark colored. On examination I found they were discolored inside. On the 23th, 26th, and 27th, it froze hard, the thermometer reaching 13°. On the 31th the thermometer stood at 70° in the shade. At this time the bark of some of the Quinces was shriveled from the top to the ground; others were only slightly injured. During last autumn and winter, and March and April, very little rain or snow fell. A few days in January it was severely cold, with strong winds. The thermometer indicated 22° below zero. What should have caused the destruction—hard freezing weather in the winter, or removing the mulching too soon with the late freezing weather, or the continued dry weather, or, in part, all? (1)

The excessive cold winter and severe spring handled our budded Cherries unmercifully. Last fall was a very warm one, and vegetation continued to grow freely, and until the first frosts, which was severe freezing weather, I noticed the extreme tops, of Cherries in particular, were injured by the sudden check. Some varieties did not form terminal buds, such as *Napoleon Bigarreau*, *DuRoi's Late*, *Davey's Early*, *Tradesman's Black Heart*, *Burr's Seedling*, *American Amber*, *Baum's May*, and *White Heart*. The Duke and Morello families, and some few varieties of the Heart and Bigarreau formed their terminal buds. After the extreme cold weather in January I noticed the bark on the south side of our early Cherry trees was shriveled and dark colored to the wood; as spring approached, it extended downward and around. By April the extent of the injury was more visible—many were dead below the intersection with the seedling. The Mazzard and Mahaleb stocks, where very rapid and late growth occurred, suffered equally with some of the budded varieties—those with terminal buds suffering the least, in fact but little. Should the fast growing have been headed back in August, or later? (2) Last year's buds did not wholly escape unscathed, and of those varieties above named as not having formed terminal buds, the loss was the most severe. We lose Pear and Cherry buds in the spring by some insect eating out the center just as the bud begins to start. The ant (of which we have not a few) is charged with it. It may be some other insect. Have you any knowledge of what it may be? (3) Late frosts have destroyed most of the fruit in this section. LEWIS ELLSWORTH. —Naperville, Du Page Co., Ill.

(1) The high wind in January, with the thermometer at 22° below zero, was a sufficient cause of the injuries to the stocks; but the buds must have suffered more from the cold in the latter part of March, after the mulching was removed and roots had begun to form.

(2) Stopping in August will aid materially in ripening the shoots. We practice it here with a few tender sorts; but you will insure the greatest safety by planting on your poorest and thinnest soils, and above all in sheltered situations. No nursery work can be successfully carried out in Illinois, without shelter.

(3) Doubtless some sort of beetle; the ant is innocent.

FEELING entirely confident that you are competent to give information respecting all subjects connected with horticulture, I solicit you to give me a little information respecting the following matters through the columns of your valuable *Horticulturist*.

What kind of manure is best for Strawberries? What should be the relative proportion of staminate to pistillate plants when planted in rows or in alternate strips? Is *McAroy's Superior* a valuable Strawberry or not? What kind of flowers does it produce? Please name some of the best varieties for general cultivation. (1)

How are stocks grafted in the winter preserved? What time in the spring should they be planted out, and if they succeed and grow well what height will they attain the first season? How many stocks can a man well skilled in the business graft in a day, and upon an average how many will grow? (2)

When is the best time to cut grafts for root-grafting in the winter, and what do grafts of the best standard varieties of Apples, Pears, Peaches, Plums, &c., generally cost? (3)

Do nurserymen cultivate trees expressly for grafts, or do they prune limbs off of the trees that they expect to dispose of? (4)

I have heard it said that grafts or buds of the Heart Cherries will not grow on stocks of the Morello or Dukes. Please give a little information on this subject, and inform me what kind of stocks should be used for Heart, Bigarreau, Morello, and Duke Cherries? (5) A SUBSCRIBER.

(1) You will find answers to your Strawberry questions in another part of this number.

(2) Covered up in sand, and kept in a cool, dry cellar. Plant out as soon as the ground is in good working order. Two feet is a good growth for root-grafted Apples, the first year, in this climate. A good grafter can set 2,000 a day; and, as a general thing, seventy-five to eighty per cent. will grow.

(3) We prefer to cut grafts here in the month of December, but it can be done safely from the

fall of the leaf until the buds begin to swell. As to prices, you must consult the nurserymen. See our advertising pages.

(4) They do cultivate trees expressly for grafts in some cases, but when necessary, they cut from trees intended for sale.

(5) The two best stocks for Cherries of all sorts, are the *Mazzard* and *Mahaleb*. Hearts, Dukes, and Morellos will all take on both these. The *Mahaleb* is used for dwarf trees.

Your great experience in the cultivation of fruit trees, vines, &c., has induced me to ask for the following information. Why are Grape vines that are trained on the ground to propagate from, or for other purposes, freer from mildew than those trained on elevated frames? Is it because nitre gathers in the shade of them, as under old buildings, and thus affording a specific against mildew, or is something else the cause? An answer to the above is respectfully solicited, as it may assist me in an experiment I am engaged in, of which, if successful, you shall be duly apprised. S. OSCAR CROSS.—*Study Hill, Wash. Co., N. Y.*

We know it to be a fact, that Grapes allowed to run on the ground are less liable to mildew than those upon raised trellises. We can not speak positively as to the cause. It may be owing to the more moist atmosphere that surrounds them on the ground, and their being less exposed to sudden changes of temperature. Some experiments made in the south of France, when the vine disease (a sort of mildew) was making great havoc, proved that the vine was safer on the ground, and more especially on a grassy surface, than on the trellis. The subject is worthy of investigation.

ONE of the boundaries of my place of residence is a high, steep bank of gravel and sand, about 160 or 170 feet long, and from 15 to 30 feet high. The expense of covering it with loam and seeding it down would be more than I wish to incur. Is there not some method of covering it with vegetation, other than that—such as planting cuttings of some quickly growing tree thickly over the surface, thus shading the surface and gradually enriching it by decomposition of leaves? What trees grow naturally in such situations? Or if there is any method of attaining my object, other than the above, you will confer a favor by making it known in the next number of the *Horticulturist*. D. L. J.—*Birmingham, Conn.*

We do not know of any quickly-growing tree that can be grown from cuttings in such soil. It strikes us that the best and quickest way to clothe it with vegetation, would be to plant small trees of Larch, Spruce, and Pine, over it, making a sort of bed of good earth for each. This might be done with trifling labor and expense, and small plants cost but little. Perhaps some of our correspondents can suggest something better.

I HEREWITH send you some pieces of Apple tree covered with insects or the deposit of insects. It made its appearance on a few trees some years ago, and has been increasing ever since. It commences its work sometime in June. The leaves quickly die as far as its work extends. I have within the last few days noticed some of the same sort of work upon some of my Pear trees, Currants, &c. As I know but little about insects in general, and the ones alluded to in particular, any information respecting it, as to the best method of destroying it, or preventing its appearance, either through the *Horticulturist* or by letter will be thankfully received. A SUBSCRIBER.—*Elkton, Todd Co., Ky.*

The shoots inclosed were so dried and blackened that we could form no accurate opinion as to the cause of the disease. They had all the appearance of shoots of the Apple affected with what is known as fire-blight, in which they turn suddenly black, as if burnt, and exude small globules of sticky, sour, diseased sap.

I ENCLOSE three gooseberries punctured and containing the young larvæ of the insect previously described to you. My whole crop is again destroyed, amounting to several bushels. I am inclined to think it a species of curesilio, if not the real curesilio; if so, it appears strange to me that they never were attacked before the two past seasons, when the curesilio has been outrageous as long as I can remember and frequently more so than the present season.

I also inclose two cocoons, and three insects—a species of canker worm—in the winged state that will soon destroy all the currants and gooseberries in Canada, if a speedy remedy cannot be found. They commence preying upon the foliage sometime in June, literally covering the bushes and devouring every leaf and leaving the bushes like bare snags with the fruit dried upon them. In some districts the gooseberry and currant is totally abandoned—dug up and thrown out. I had expected to hear something from Rochester before this, but nothing has appeared. The eleventh hour is approaching; if anything is to be done it should be done quickly. I have been informed that they prevailed in the vicinity of Toronto five or six years ago, and have since been moving southward. They have now made their appearance in this locality.



I will give a short description of the worm:—When fully grown, rather more than an inch in length, yellowish green and speckled with black; when the bushes are shaken they will suspend themselves by a fine thread and remain in a dangling position until all is quiet, when they will ascend again by the same thread; when the season of casting is over they suspend themselves by a thread to the ground, enter it from half to three-quarters of an inch, form a cocoon, and in about ten or twelve days come out the fly and return to the bushes again. By shaking the bushes when the leaves are on they will dislodge themselves and fly for protection in all directions, hiding among any rubbish they can find. I have never seen them before this season, and can give no further information from personal experience at present, but am on the alert. I found them trespassing upon my bushes, and immediately declared war against them. I sallied out two or three times a day, armed with an old tin dish, gave the bushes a shake, and after they were dangling in their suspended form I could easily secure them in the old tin dish. I have no doubt I destroyed several pecks of the worms. I have been informed that where they once made their appearance they never failed to annually destroy the Currant and Gooseberry, and all the remedies that could be applied proved of no avail. I cannot bear the thoughts of dispensing with such refrigerating luxuries as *Ribes* and *Crispa*.  
SAMUEL STONER.—*Humberstone, C. W.*

The grub within the fruit is undoubtedly the curculio, but the winged insect and the chrysalis are the Gooseberry caterpillar. We have known them to be very troublesome at Toronto; but if they are sharply looked after, and taken when quite small, they can be subdued before they do much injury. Clean lime water thrown on them with a syringe,—and tobacco water, as we have frequently recommended to kill aphides,—or whale oil soap and water, mixed at the rate of about two pounds of soap to fifteen gallons of water,—will drive them off; and where any or all these fail to clear the bushes, hand picking should complete the work. The leaves should be examined, on the under sides, both in autumn and spring, and all eggs destroyed.

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### Horticultural Societies, &c.

A GREAT "CATTLE CONVENTION" IN OHIO.—We have to call the attention of our readers to the following circular. The United States Society has made a very fortunate choice of location for such a gathering—the very heart of the greatest stock region in America. It will, no doubt, be as successful as its predecessor, the great horse show at Springfield, Massachusetts:—

DEAR SIR:—The 25th, 26th, and 27th days of October next have been fixed by the United States Agricultural Society for holding its first Cattle Convention, in the City of Springfield, Clark county, Ohio.

Six thousand dollars will be distributed in premiums for the best stock of the various breeds of Cattle subject to competition without territorial limit.

The Executive Committee of the United States Agricultural Society have been careful to select a time that will not, so far as they are aware, conflict with any of the State Fairs or other meetings of general interest; and after due deliberation have selected this place as the most eligible for holding the Cattle Fair. Springfield is centrally located as regards the cattle region; it is most convenient of access by rail road from almost every point of the compass. The means for accommodating, at very moderate charges, a large number of persons are ample. Private houses will be opened for the reception of guests. There are also eighteen cities and towns within reach by an hour's ride on the rail roads, on which extra trains will be placed to accommodate such as wish to go elsewhere for lodgings.

About twenty acres of ground have been enclosed, and more than three hundred stalls will be prepared for the shelter of cattle during the convention.

It is expected that very liberal arrangements will be made by all the rail road companies, both for the transportation of cattle and the conveyance of passengers to and from the Fair.

We respectfully solicit your attendance on the occasion, and that you will furnish us with such aid as you may feel disposed in making known the objects, time, and place of the Conven-

tion; and if you have improved stock of cattle, of any description, we cordially invite you to enter them for competition.

A List of Premiums and a Copy of Regulations will shortly be published.

J. T. WARDER, C. M. CLARK, CHANDLER ROBBINS, *Local Executive Committee.*

GENESEE VALLEY HORTICULTURAL SOCIETY.—The Summer Exhibition of this Society was held at Corinthian Hall, Rochester, on the 24th of June. The following are the Reports of the Committees:

REPORT OF THE COMMITTEE ON FLOWERS AND FLOWERING PLANTS.—The display this season was very creditable to the Society, though not in as great profusion as at some former shows, but the articles exhibited were choice and well grown. Cut flowers from out of doors, particularly roses, were in great abundance, but they were not in as good condition as they would have been had not a heavy rain the day before materially injured many of the blooms. Messrs. Ellwanger & Barry contributed a superior collection of Ploxes, Paeonias, and other cut flowers. The display of Roses, embracing 238 varieties from A. Frost & Co., was very fine. The Committee award the following premiums:

AMATEURS' LIST.—*Roses*—Best collection, named, J. A. Eastman, \$3; 2d best do., D. C. Greenleaf, Brockport, \$2. Best 6 varieties named, D. P. Newell, \$1. *Verbenas*—Best collection, named, D. C. Greenleaf, Brockport, \$2. *Boquet*—Best table, C. F. Crossman, \$2; 2d best table, D. C. Greenleaf, Brockport, \$1; best band, Mrs. M. Jewell, \$2.

NURSERYMEN'S LIST.—*Roses*—Best collection, Ellwanger & Barry, Diploma; 2d best, Samuel Moulson, \$2; best 25 varieties, A. Frost & Co., \$3; best 12 varieties, A. Loomis, Byron, N. Y., \$2. *Verbenas*—Best collection named, A. Frost & Co., Diploma; best 12 varieties, A. Frost & Co., \$2. *Boquets*—Best table, C. J. Ryan & Co., \$2; 2d best table, Jno. Donnellan & Nephews, \$1; best band, C. J. Ryan & Co., \$2; 2d best, A. Frost & Co., \$1. *Floral Ornament*—Best, A. Frost & Co., \$3. *Green House Plants*—Best collection, A. Frost & Co., Diploma; best 12 specimens, Bissell & Hooker, \$5.

REPORT OF THE FRUIT COMMITTEE.—The Committee on Fruits report that the exhibition of Strawberries was very fine, though the exhibitors were few in number. The fruit well grown, but the flavor considerably injured by the recent heavy rains.

In the amateur list, no collections were offered worthy a premium.

In the professional list, Ellwanger & Barry exhibited 34 varieties of Strawberries, including several seedlings of their own raising. Bissell & Hooker 17 varieties, very well grown. Geo. Newland, of Palmyra, 15 varieties, well grown, and especially the *Red Alpine*, which were much larger than they are ordinarily grown. He had several varieties not in other collections. Among these the *Pyramidal Chilian* attracted much attention, both from its size and excellence. D. Southworth, of Penfield, presented *Burr's New Pine* in very fine condition. Mr. Zera Burr, of Perrinton, exhibited 13 varieties of seedling Cherries, several of which give promise of excellence. They are mostly early and on that account valuable. Ellwanger & Barry exhibited 16 varieties of early Cherries, including *Geo. Wood, Rockport Bigarreau, Burr's Seedling* and *Coe's Transparent*, fine American sorts. T. A. Newton sent for exhibition a large number of quart boxes of *Burr's New Pine*, in beautiful condition. The following are premiums awarded: To Ellwanger & Barry, for best collection of Strawberries, \$5; to Bissell & Hooker, for 2d best, \$3; to Geo. Newland, best quart, *Pyramidal Chilian*, \$3; to D. Southworth, 2d best *Burr's New Pine*, \$2; to Zera Burr, a gratuity for his seedling Cherries, \$5.

REPORT OF THE VEGETABLE COMMITTEE.—The Committee regret that the show of Vegetables was small, and their labors consequently light. The premiums awarded are as follows:—*Lettuce*—Best six heads, D. C. Greenleaf, Brockport, \$2; 2d do. do., C. F. Crossman, \$1. *Cucumbers*—Best six, C. F. Crossman, \$1. *Peas*—Best peck, D. C. Greenleaf, Brockport, \$2; 2d do., C. F. Crossman, \$1. *Rhubarb*—Best 12 stalks, John Donnellan, \$1.

MASSACHUSETTS HORTICULTURAL SOCIETY.—May 27, 1854—The Society met pursuant to adjournment. The President presented a report from the Executive Committee, and, on his motion, the matter was recommitted.

The following gentlemen were appointed a Special Committee to consider the policy of a sale of the Society's property in School street, and of purchasing another site for a Hall: The President, and Messrs. WILDER, WALKER, FRENCH, and STICKNER.

W. S. KING, Chairman of a Special Committee appointed for the purpose, offered the following Report:

The Select Committee appointed by this Society to examine into all the circumstances attending the award to Messrs. Hovey & Co. of a Gold Medal for a seedling Cherry, and a gratuity of \$20 for a seedling Pear, report the following facts:

That at the last meeting of the Society (in 1853), previous to the incoming of the newly-elected Officers and Committees, the Chairman of the Fruit Committee presented a draft of his report, which was recommitted to him for completion. That in the draft of Report so submitted, no mention was made of any award of medal or gratuity to Hovey & Co.; nor up to that time—the last day of their existence—had the question of such awards been discussed in Committee.

That after the adjournment of the Society on the day above mentioned, and after the departure of the Chairman of



the Fruit Committee, C. M. HOVEY called together three members of the Committee (which consists of seven members) and urged upon them, very strenuously, the merits of the seedling Cherry, which he claims to have originated, and of the Pear, which he claims to have introduced. That two of the three members were of the opinion that the Cherry had not been exhibited for five years, as required by the rules of the Society. This position was controverted by Mr. HOVEY, who also contended that his seedling was conceded to be the best that had been exhibited.

Your Committee understand that, when the matter was pressed to a vote, one member (of those present) declined to vote, one other voted for the award of a medal with the proviso that it should be proved to have been exhibited five years, and the other member voted for the award without conditions. The vote upon the Pear was about the same.

The Committee are further informed, that the first intimation received by some members of the Fruit Committee that such awards were even contemplated, was obtained from the printed Transactions of the Society.

In the opinion of your Committee, this conduct on the part of a competitor for the highest premiums of the Society ought not to pass unrebuked. Not only is it subversive of all order and good government that Committees should be called together without proper authority, but the offence is magnified when the person usurping the powers of the Chairman is himself the claimant before the Committee—a party to a suit, before judges whom he may select for himself, and the ex-parte advocate of his own interests. The Society is wronged, because their rules are trampled upon; the Committee is wronged, because they are deprived of the benefit of a full discussion and of time for consultation; the unnotified members are wronged, because they are allowed no voice in the decision; the members present are wronged, because they are subjected to the personal solicitations and persistent pleadings of the applicant; other competitors for premiums are wronged, for their claims are pushed aside; the public is wronged, because it accepts as the well-considered action of the Society what is, in truth, but the opinions of one or two members, hastily convened and hurried to a decision by the party most interested.

If this instance of irregularity which has been brought to the notice of the Society is suffered to pass without censure, your Committee believe that the public will regard with diminished confidence the decisions of the Society; for they will, with reason, suspect that our medals and gratuities for new varieties of fruit, flowers and vegetables, are indices rather of the adroit management of the applicants than of merit in the articles. The number of exhibitors at our shows and of competitors for premiums will be sensibly diminished; for modest merit will have no chance against unscrupulous assurance. Already complaints, "not loud, but deep," have been heard, that rules which are stringently enforced against some members, are broken with impunity by others.

In view of the facts above stated, your Committee present the following resolutions for your adoption:

*Resolved*, That the conduct of C. M. HOVEY, a member of this Society, in procuring the award to HOVEY & Co. of a gold medal for a seedling Cherry, and of a gratuity of \$20 for a seedling Pear, was irregular and improper, and is censured by this Society.

*Resolved*, That a Committee of three be appointed, by nomination, to examine and report what, if any, alterations are needed in our Constitution or By-Laws to prevent a repetition of such a transaction.

Signed, WILLIAM S. KING,  
SAM'L WALKER.

This report, with the annexed resolutions, after an interesting argument of more than two hours' duration, was adopted, at an unusually full meeting, with but one dissentient voice.

R. MORRIS COPELAND, of Roxbury, then moved a reconsideration, which motion was lost.

The following committee was then appointed to act under the second resolution: MESSRS. B. V. FRENCH, SAM'L WALKER, and R. MORRIS COPELAND.

Adjourned to June 3d, at 11 o'clock, A. M.

CINCINNATI HORTICULTURAL SOCIETY.—Since the Spring Exhibition, this Society has held many very interesting meetings. Fruits of various sorts have made their appearance, and elicited discussion. Among these, we may notice the Gooseberries, free from mildew, produced by Dr. BROWER, of Lawrenceburgh, Indiana. This exemption is attributed by the cultivator to his method of summer pruning. The premium for early Pears was awarded to the indefatigable pomologist, Mr. MCWILLIAMS, who is always a prominent contributor, and who has again presented his "*Yellow June*" Apples, which we believe to be the true *Prince's Early Harvest*, though differing somewhat from the descriptions in the books, and remarkable for their very short stems, as well as for their excellence. F. C. IVES has surpassed all others in displays of Currants. W. E. MEARS presented for Mr. MCCORMACK a variety of Black Raspberry, a seedling of merit, which was commended for further trial. Mr. PINKENSTEIN, from imported German trees, exhibited Pears, Apples, and Cherries, of varieties not recognized by the committee. He also presented the earliest specimens of Egg plants.—*Horticultural Review*.

THE SUSQUEHANNA AND CHEMUNG VALLEY HORTICULTURAL SOCIETY held its first exhibition in Elmira on the 28th of June. All reports speak of it as having been highly successful. We hope to hear the same report from future shows. The Society embraces a tract of country which can support such a Society well, and derive great benefit from its influence.



**HAMPDEN HORTICULTURAL SOCIETY.**—The first exhibition of this society for the present season, took place on Friday at Springfield, Mass. The display of flowers, fruits, and vegetables, was highly creditable to the taste and skill of the competitors, and the exhibition as a whole was very beautiful, answering fully the utmost expectations that had been formed. The array of fruits and vegetables, though not so large as could have been wished, was still very fine, and presented many superior specimens. The department of flowers excelled, and great taste and ingenuity were shown in the selection and arrangement of the most attractive designs. Our space will permit us to enumerate only a few of the contributions which we noticed during a brief visit to the Hall. Among these were several varieties of choice plants, including a splendid Cactus in full bloom, and an Orange tree laden with ripe fruit, from Mrs. E. C. TRASK; fourteen vases of rich cut flowers from Mrs. E. D. RICE; a vase of Canterbury bells, from Mrs. J. B. RUMRILL, attracted much admiration; a beautiful vase of flowers from the Misses EDWARDS; another from Mrs. C. P. CHAPIN; a dish of Pansies and Verbenas, very choice, from Miss C. LOMBARD; splendid Dahlias and Peonies, the former the only ones in the exhibition, from E. INGERSOLL; an Orange tree bearing rich and ripe fruit, from HENRY BREWER, JR.; two magnificent vases of flowers from BLISS & HAVEN; beautiful cut flowers from Mrs. E. BLISS, Miss LUCY ASHmun, and Mrs. S. MERRICK; a superb collection of plants and flowers from Mrs. D. C. BREWER, among them fifty varieties of Roses, two splendid vase bouquets and a basket of cut flowers; from B. K. BLISS, another choice variety of plants and flowers, including tastefully arranged Verbenas, Peonies, Roses, &c.; a rich bouquet of dried grasses and wild flowers, from GEO. M. ATWATER; 47 varieties of Verbenas, from DEXTER SNOW, and 40 varieties of Roses, from ROBERT E. MOORE, both of Chicopee, added an attractive contribution to the display. There were many others too beautiful to be omitted, but we are obliged to pass them this morning.

Among the fruits we saw some of the choicest varieties of Strawberries, from IRA B. SAMPSON; rare specimens of Gooseberries, from H. J. CHAPIN; finely developed Cherries of the *Black Tartarian* variety, from JAMES M. THOMPSON; *Coe's Transparent*, do., superior, from JAMES D. BREWER; also fine *Black Tartarian*, do., from E. MCINTYRE, DANIEL GAY, and others; also beautiful specimens of *May Duke* and *Bigarreau*, from Mrs. J. B. ADAMS; some of the finest specimens of Strawberries, *Hovey*, *Willey*, and *Jennyseedlings*, from DANIEL GAY, H. J. CHAPIN, and Mrs. B. C. KNOX of Longmeadow; among other choice specimens of Strawberries, was a plate of *Boston Pine*, from IRA B. SAMPSON; also of the *Giant Alpine*, from Mrs. E. L. EDWARDS. In this department of the exhibition there were also other tempting specimens of various fruits, which we are sorry we have not room to enumerate.

The display of vegetables presented superior products for the season. Among them were some fine varieties from Mrs. R. BAGG, JR., of West Springfield, J. M. THOMPSON, Mrs. J. B. RUMRILL, Rev. Mr. SEELEY, JOSIAH HOOKER, W. M. CARR, H. J. CHAPIN, and others, of this city.—*Springfield Republican*.

**NORTHWESTERN POMOLOGICAL CONVENTION.**—The next Annual Meeting of this association will be held at Burlington, Iowa, commencing on the last Tuesday (26th) of September, at 10 o'clock A. M., and continuing four days. Then "come one, come all" interested it fruits and fruit trees.

Communications are solicited on any or all branches of horticulture—which, together with any boxes of specimens, may be directed to the "N. W. Pomological Convention, care of Messrs. AVERY, Burlington, Iowa."

Editors friendly to the cause, please notice.

By order.

F. K. PHENIX, *Cor. Sec'y*.

**WISCONSIN FRUIT GROWERS' ASSOCIATION.**—The first exhibition of this Association will be held in Milwaukee about the first of October next. Of the precise time due notice will be given. It is the intention of the officers of the Association to spare no effort in making it as attractive as possible, and of real utility to all concerned. The following is a list of the officers:

*President*—H. J. STARIN, of Walworth. *Vice Presidents*—MILES HOLMES, of Jefferson; S. P. LATHROP, of Rock. *Recording Secretary*—MARK MILLER, of Rock. *Corresponding Secretary*—E. B. QUINER, of Jefferson. *Treasurer*—R. W. PARKER, of Milwaukee. *Executive Committee*—CHAS. GIFFORD, of Milwaukee; A. L. CASTLEMAN, of Waukesha. D. J. POWERS, of Dane.

**PITTSBURGH HORTICULTURAL SOCIETY.**—The usual Monthly Meeting of the Society was held on the 7th inst. The following is the Report of the Committee on Monthly Exhibitions:

ROBERT McKNIGHT, Manchester, exhibited 7 varieties of Strawberries, with their measurement—*T. to in* 4½ x 4, 4½ x 6, 4½ x 4; *British Queen* 1½ x 1½, 4, x 1, 4½ x 4; *McAvey's Superior* 5 x 4½, 1½ x 4½, 4½ x 4; *Reed Prize* 4½ x 4½, 4½ x 4½, 4½ x 4½; *Hugh's Seedling* 3½ x 1, 3½ x 3½, 3½ x 3½; *Reed Prize* 4 x 3½, 5½ x 4½, 7½ x 3½; *McAvey's Seedling*, medium. The Strawberries exhibited by McKNIGHT show evidence of high cultivation—and greatest perfection attained by these several named varieties. HUGH McCARTHY, gardener to D. Holmes, exhibited fine specimens of *Hugh's Seedling*, *Victoria* and *Baird's Prize*. JAMES LAMONT, gardener to J. H. Schoenberger, specimens of the *Victoria*.

The Committee consider *Baird's Prize* and the *British Queen* as the best varieties of Strawberries for market purposes—and *McAvey's Superior* as the most productive and finest flavored variety.

**June 21st**—The Society met at WARREN'S. J. MURDOCH, JR., exhibited eight varieties of Moss Roses—*Celine*, *Cristata*, *Mottled*, *Lanai*, *Anglique*, *Adelaide*, and common pink—exceedingly fragrant and beautiful. MR. R. McKNIGHT exhibited a stock of *McAvey's Superior* Strawberry, with eleven perfect berries. At the meeting two weeks since, MR. M. presented three stocks, with twenty-two, twenty, and nineteen berries. The Committee were unanimous in recommending this variety for garden cultivation, from its fine size and delicious taste. It is scarcely firm enough for a market fruit. *Burr's New Pine* is of good size, a very productive and aromatic fruit, and will rank with *Baird's Prize* (our No. 1) as a market fruit, having the advantage of ripening some days earlier. The *British Queen*, exhibited by MR. McKNIGHT, is a different variety from *Brewer's Victoria*, of extra large size, and fine flavor. One berry measured 5½ by 4½ inches. MR. McKNIGHT exhibited three varieties of Raspberries—very large and superior *White Antwerp*, *Fastolfe*, and *Red Antwerp*. MR. JAS. McLAUGHLIN, of Ohio township, presented, through MR. HEIDLEBERG, a basket of very large *Hawthorns*, which are commended for their delicious perfume. The ready sale, at high prices, of good fruit in our market, should induce every person to send specimens of new varieties, especially seedlings, to the Horticultural Society, so that reports can be made as to the varieties deemed most worthy of cultivation in Allegheny county.

JAMES WARREN, *Secretary*.

**TOLEDO (OHIO) HORTICULTURAL SOCIETY.**—The following officers and members of committees have been chosen for the current year:

FREDERICK BISSELL, *President*. HENRY BENNETT, *Vice President*. C. E. PERIGO, *Secretary*. A. D. PELTON, *Treasurer*.

**COMMITTEES.**—*Executive Committee*—Wm. Baker, T. M. Cooley, and D. Wadsworth. *On Shade Trees*—M. Johnson, Chairman; 1st Ward, C. W. HFI; 2d Ward, J. W. Kelsey; 3d Ward, J. W. Scott; 4th Ward, W. H. Peabody. *On Fruits*—T. M. Cooley, Mrs. A. C. Harris, Mrs. Wadsworth, Chas. E. Perigo, Geo. W. Scott, and Darwin Gardner. *On Vegetables*—J. W. Brown, Mrs. H. Bennett, Mrs. M. L. Collins, Chas. Williams, and H. Ruetenik. *On Roses*—Wm. Baker, Mrs. M. Johnson, Mrs. E. Bliss, Mrs. C. E. Perigo, Miss Mary Mott. *On Cut Flowers*—Bernard Arnoldt, Mrs. M. R. Waite, Mrs. Thos. Dunlap, Miss Elizabeth Bissell, Mrs. N. Allen. *On Greenhouse Plants*—F. Hansen, Mrs. L. Bissell, Mrs. E. Haskell, Mr. Brand, T. C. Everts. *On Miscellaneous Articles*—Mrs. J. R. Williams, Mrs. John Fitch, Mrs. A. B. Walbridge, Mrs. W. W. Williams, Mrs. Platt.

**DELAWARE (OHIO) HORTICULTURAL SOCIETY.**—At the meeting of this Society held Friday evening last, C. HILLS exhibited *Red Antwerp*, *Franconia*, and *Yellow Magnum Bonum* Raspberries; *Red* and *White Dutch* Currants; and *Noodlum's New White* Blackberry. The last named, if the specimens exhibited may be taken as a fair sample of the fruit, is one of those horticultural humbugs so frequently imposed upon amateurs by unscrupulous sharpers. MRS. KILBOURNE sent in a magnificent specimen of the *Yucca*, a beautiful though much neglected flowering plant, the flowers in bloom on two spikes numbering nearly three hundred. MISS CALLIE MURRAY contributed a very handsome bouquet. MR. BARNET exhibited a fine bouquet, and a superior lot of vegetables. A. THOMSON, some rare flowers and fine specimens of the *Moorpark* Apricot.—*Olentangy Gazette*.







## Hints on the Gathering and Ripening of Summer Fruits.

WE believe that full three-fourths of all the summer fruits consumed in this country, reach the hands of consumers in a totally unfit state for the use of human beings who are not prepared to commit suicide. So alarming has this traffic become, and more especially in cholera times, that the humane and enlightened public authorities of such well-regulated cities as Rochester have actually published an ordinance prohibiting the sale of fruit, thus placing it on an equal footing with the very worst of public nuisances! The man who offers fruit for sale at his door, is considered as great an enemy to the public welfare as he who would let a mad dog loose in the public streets. Is not this something to be surprized at, and regretted? *Fruits*, which should be the most healthy and refreshing articles of human food, and especially during the sultry season of the year, (when strong animal food is out of the question,) forbidden, as though they were poison! It is high time, surely, for some reformation in the manner of preparing and offering fruits in the market. Green Apples, rotten Pears, and fermented Peaches, will not much longer be tolerated by law anywhere, even if permitted by the necessities and ignorance of the public. Those who grow fruits for market must therefore make up their minds at once that they must prepare them properly, just as farmers do their grain, beef, pork, or poultry. All these things must by common consent be dressed and put in fair marketable condition before being exposed for sale, and why not fruits? Look at the economy of the matter. One man comes into town with a few bushels of nice, selected, ripe Apples, or carefully hand-picked and house-ripened, delicious Pears, and without any peddling about the streets he disposes of them at his own price; while another, who has shaken some fruits off his trees, thrown them into a wagon box, and brought them into market, is shunned and driven out of town with his load, as though he were freighted with a plague.

All the fruits that are grown, and ten times as many more, would not be enough to supply the public wants in this country, were they properly ripened. Carelessness is largely at the bottom of the abuses that prevail in these matters. Fruit-growing, with a great majority of those who supply the markets with fruit, is not a regular profession, but a sort of subordinate incidental one; other branches of their pursuit are considered more important, and the fruits are passed hurriedly and negligently through their hands, the object being to get rid of them with the least possible waste of time. There is a great field open to those who will embark in this business systematically and thoroughly. We remember, at a conversational meeting of fruit-growers and those interested in the subject, at Saratoga, last year,\* some statements being made, showing the advantages that resulted from the exercise of skill and care in gathering, ripening, and assorting fruits for market. It was stated that *Bartlett* Pears, gathered at a proper time, and matured in the house, sold for three or four

\* See page 517 of our last volume.

times as much as others carried from the tree direct to the market; and that, by assorting them into grades, a few of the very finest sold for as much as the whole would have brought if offered in promiscuous order as they came from the tree. This will hold good everywhere, even with public taste in these matters crude as it is.

The management of fruits at all seasons requires constant care and watchfulness, beside an amount of knowledge in regard to the process of ripening in the different fruits which can only be acquired by minute observation. Some fruits must be allowed to attain perfect maturity on the tree, and be consumed as quickly as possible after being gathered. Of this class are Strawberries and Cherries.

*Strawberries* should be perfectly ripe, but not over-ripe, as the fine flavor and healthiness are gone the moment fermentation commences. They should always be gathered the same day they are used. The present mode, which is generally followed, of picking on one day the fruit which is to be carried to market the next, and kept the whole of that in the stalls of the fruiterer, should not be tolerated; as the fruit must thus be nearly two days gathered in warm weather, and therefore in an incipient state of decomposition before it reaches the table of the consumer. It is almost impossible to get a dish of really fresh Strawberries at the very best hotels. It would involve greater expense to gather early in the morning the fruit for that day's use, but they should, and we believe would, sell for an advanced price, at least to intelligent purchasers.

*Cherries* are seldom seen in the markets or on tables of public houses in a perfectly mature state; and, as far as our observations have extended, but few who grow and gather for their own use, take pains to have them completely ripe and perfect. Black Cherries are very seldom seen black; and until a Cherry is quite ripe, no judgment can be formed of its flavor; and while ripe Cherries, fresh and sound, are healthy and refreshing, unripe ones are detestable. Cherries should be always picked with the stalks on, and in the morning of the same day they are to be used; and if cooled with ice before being placed on the table, they will be much more refreshing and agreeable.

*Raspberries* should ripen perfectly on the plants, and there is but a short time in which they are exactly right. Before fully ripe, there is an absence of that delicate flavor and perfume which constitute the excellence of this fruit; and every hour they are allowed to remain after maturity, is injurious to a greater or less extent. The color of the fruit and the readiness with which it parts from the core, are reliable indications of maturity. Those who are charged with the direction of such matters, should make themselves familiar with the peculiar appearance of the different fruits when ripe, and should make numerous experiments in gathering, until they find they have mastered this point. Many fruits look ripe when they are not, and others the reverse; so we can not rely upon appearances.

*Currants*, when intended for the table in a raw state, should be quite ripe, otherwise their sharp acidity will render them unfit for use. Currants look ripe a long time before they really are so. Like Cherries, they are very seldom seen ripe in the markets; and not one person in a thousand knows how mild and pleasant are large, well-grown, *ripe* Currants. Instead of being as hard as grape shot, they should be so



soft that at the slightest pressure the juice will run out. When over-ripe, they begin to shrivel, and very soon become worthless. Very few persons who are sent to gather Currants will do it properly; instead of taking only the ripe fruit, they take whole bunches, ripe and unripe, as convenient. In all the long-bunched varieties a certain number of the fruits of each bunch will ripen before the others, and hence the whole bunch should not be gathered at once. Ripe Currants are healthy and refreshing fruits; and we believe if the large *Dutch*, *Cherry*, *White Grape*, and *Victoria* varieties, were grown well, ripened to perfect maturity, and brought fresh into market in small baskets, as are Strawberries and Raspberries, they would find ready sale at good prices.

*Gooseberries* are used considerably in a green state for tarts, but when intended for the dessert they should be quite ripe. In this state a shake of the bush will cause them to fall. They will not shake off easily until fully ripe, nor will they hang on a great length of time after they are ripe.

*Blackberries* also shake off easily when quite ripe. As long as it requires some force to separate them from the stalk, it is certain that they are uneatable.

*Mulberries*, too, are very easily shaken off, or drop when they are ripe.

*Apricots* should ripen on the tree, and should be used within twenty-four hours after they are gathered. Their ripeness may be judged of by sound specimens falling when the branches are agitated by the wind or by hand.

*Peaches* and *Nectarines*, as a general thing, are better if house-ripened a day or two. The early sorts, ripening in very warm weather, can not be kept long after gathering. The later sorts, and especially clings, are improved by being in the fruit-room several days—in some cases a week. Some of the late clings may be kept a month in the house. All Peaches inclined to be dry or pasty when ripe, should be gathered early, say a day or two before fit for use, and they will be juicy. Many good Peaches are pronounced worthless on account of being dried up on the branch. In all cases, however, the ripening process must have attained a certain stage on the tree, to enable it to reach perfection in the fruit-room. Gathered too soon, they become sour, as are most of the Peaches brought into market in a half ripe or unripe state.

*Plums* should ripen completely on the tree. Some, the greater number, will fall, or are easily shaken off when ripe; but many will hang on after they are ripe, without decaying. Such are the *Jefferson*, *Smith's Orleans*, *Coe's Golden Drop*, *Blue Imperatrice*. These even improve, sweeten, and become higher flavored, by hanging on the branch after they are ripe, and shriveling slightly. A few varieties of the prune character will keep in a dry, cool place, a considerable length of time after being gathered. The *Ickworth Imperatrice* will keep a month or more, becoming sugary and dry, like a prune.

All *Summer Apples* should be gathered a few days before being used. Varieties with a good deal of acidity, such as the *Red Astracan*, *Early Harvest*, and *Gravenstein*, may be allowed to ripen so far as to drop, or be easily shaken from the tree, and yet be in good condition for the table; but sweeter sorts, such as the *Early*

*Straucherry, Summer Rose, Williams' Favorite, Sweet Bough, Golden Sweeting*, and all of that class, become mealy, and should be gathered as soon as the skin changes color and the stalk can be easily removed from the branch. Laid on shelves in thin layers, where the air is still, they will remain in use a considerable length of time, or they may be safely sent to distant markets.

*Summer Pears* are mismanaged to a much greater extent than any other fruit, partly because they bear ripening on the tree worse than any other fruits, but more particularly on account of the lack of knowledge that exists in regard to the proper time for gathering them and the circumstances most favorable to their perfect maturation. A summer Pear ripened on the tree is a detestable thing; there is scarcely an exception. The process of ripening on the tree, which is the natural one, seems to act upon the fruit for the benefit of the seed, as it tends to the formation of woody fibre and farina. When the fruit is removed from the tree at the very commencement of ripening, and placed in a still atmosphere, the natural process seems to be counteracted, and sugar and juice are elaborated instead of fibre and farina. Thus Pears that become mealy and rot at the core when left on the tree to ripen, and are pronounced worthless, become juicy, melting, and delicious when ripened in the house. Good Pears are very often condemned on this account, and not one person in a hundred ever tastes even the finest sorts in a perfect state. It requires more skill, more close observation and practice, to gather summer and autumn Pears at the right time, than most people possess, or are willing to bestow. The most experienced and the most careful of us fall short in this matter. Every new Pear is a new study in its ripening. Some people say that they would prefer Pears that would ripen on the tree; but we regard as a most important and valuable property that of ripening in the house, because it enables the orchardist to gather his fruit ten or twelve days or more before he offers it in market, and gives him ample time to assort it and convey it, if he choose, hundreds of miles. Summer Pears, such as *Madelaine, Doyenne d'Ete, Beurre Giffard, Osband's Summer, Bloodgood, Bartlett, &c.*, may be grown in Western New York or Ohio, and be sent forward to the markets of Boston, New York, or Philadelphia, in as good condition as though they were grown within twenty miles of either of those cities. Is not this an important advantage? We believe it is, and we desire to call the attention of fruit-growers to it particularly, because it is a common impression that summer Pears can not be grown for distant markets. Fruit-ers in these large cities should provide themselves with spacious rooms convenient to the city, where they could take these summer Pears in an immature state, as they come from the trees, and there ripen and assort them to fit them for their market stalls and the tables of their customers. When summer Pears have attained their full growth, a change in the color and feeling of the skin immediately begins to take place;—the green becomes paler; the red, if it have red, lighter; the surface becomes smoother and finer; the base of the stalk at the union with the branch enlarges: and these are the indications of fitness for gathering. In our experiments in gathering, we find the earliest picked, provided they have attained their growth, are the best. *Beurre Giffard*, which is the largest and finest early summer Pear we



have, immediately succeeding the *Madelaine* and *Doyenne d'Ete*, will remain on the tree a fortnight after they should be gathered, without appearing to be ripe. We picked some this season in the last week of July, before the very earliest varieties were gone, and while they were quite green-looking; and after laying about two weeks in a drawer, excluded from currents of air, we found them better, more melting, juicy, and higher flavored, than we ever tasted it before, and of finer quality than we had ever expected to find it, equaling a luscious *Belle Lucrative*.

It is by experimenting in this way that people must find out the proper time to gather, and the best mode of ripening their fruits. Written instructions, such as we can give, can not be a reliable guide to persons in other localities, where season, climate, and other causes exert a great influence on fruits. All we can do is to suggest the course which must be taken. As a general thing, ten to fifteen days of house-ripening are essential to bring out the real excellence of summer Pears, and no variety should be pronounced worthless without having been fairly submitted to this treatment. We think that currents of air passing over fruits while undergoing the process of ripening, are injurious, though summer fruit rooms should be ventilated, but in such a way as not to produce agitation. We are not positive that light, even the direct rays of the sun, are injurious; but our experience is, that both color and flavor are brought out more perfectly where the light is subdued. We think our best ripened Pears generally are those shut up in drawers when taken from the tree, and kept there till ripe. Changes of temperature should always be avoided, because they produce a reaction in the ripening process that can not fail to be injurious. A steady temperate heat is the best; excessive heat in the fruit-room has somewhat the same effect on the fruits as ripening on the tree.

We will thank our correspondents who may have experience in these matters, however trifling it may be, if with but *one* variety, to communicate the results, and thus aid us in collecting in our pages a fund of information on this important topic. We have but opened the matter for discussion; who will follow?

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### THE MELON APPLE.\*

SYNONYMS: *Watermelon, Norton's Melon.*

THIS finest of American apples was first brought to notice by ELLWANGER & BARRY, in 1845, through the *Albany Cultivator* and the *Boston Cultivator*. Since that time it has been described in *Hovey's Magazine*, thirteenth volume, and in all the pomological works published since that time. It has been disseminated to some extent by the nurseries; but the tree being a delicate grower, renders it somewhat difficult of propagation, and the stock has consequently been very limited. The best way to obtain good standard trees for orchards within a reasonable time, is to top-graft it on strong growers, such as the *Northern Spy* or *Baldwin*. The fruit, we think, has no

\* See Frontispiece.



superior, if an equal. It is tender and juicy as a Peach, with an agreeable and peculiar perfume, which suggested the name of *Watermelon* originally. We once carried some specimens with us to Europe, and presented a few to Mr. RIVERS, who pronounced it the most tender and delicious Apple he ever tasted.

Size—large, three to three and a half inches broad and three inches deep. Form—round, slightly flattened on the ends. Stalk—about an inch long, rather slender, and inserted in a pretty deep, regular cavity, covered with russet. Calyx—closed, large, in a large, deep basin. Skin—smooth generally, but often rendered rough to the touch by a tracing of russet, pale whitish-yellow in the shade, nearly covered with light red, and frequently with bright vermillion stripes. Flesh—white, and remarkably tender, with abundance of juice, very mild subacid, with a sort of melon flavor. Season—November to March, in Western New York. Tree—erect when young, spreading as it grows older, but still compact and regular. Shoots—slender, olive-colored, with numerous russet specks. Leaves—large, folded, serrate, smooth and shining above and woolly underneath. It grows well on the *Paradise* stock, and makes a handsome, prolific bush, for small gardens.

It originated with the *Northern Spy* in the orchard of Mr. CHAPIN, of East Bloomfield, Ontario county, N. Y., and until about nine years ago its culture was confined to a few orchards in that vicinity. It was first brought to our notice by Mr. REUBEN NORTON, of East Bloomfield, who recommended it by saying that, "of all the Apples he grew, (and he had a very fine collection,) this was always the first to be consumed by his family and friends." We consider the fruit rather too tender to bear long carriage, or much handling, and the tree scarcely vigorous enough in its growth to be recommended for *profitable* culture; but it should by all means be in every family orchard or fruit garden, as the finest of all winter dessert Apples.

## NOTICES OF NEW FRUITS.

WE have some items of useful information concerning new fruits, from our correspondents, which, with a few other notices, we have brought together in a chapter, under an appropriate heading.

STRAWBERRIES. — *Scott's Seedling*.—Raised a few years ago by Mr. SCOTT, a market gardener, of Brighton, Mass., and described as a large, handsome berry, two inches long, and half that diameter at the base; of a rich, glossy, crimson color; early and productive. It was first offered for sale in the spring of 1853. In the August number of *Hovey's Magazine* it is said to come fully up to expectations.

*McAvoy's Superior* is said to have done better than in previous years, but rarely fills up well, and is rather acid and too soft for market, but productive and hardy. This corresponds with our own experience exactly. In our description of this fruit, which Dr. WARDER pronounced incorrect, we alluded to this imperfection in filling out at the point.

**BLACKBERRIES.**—The Blackberry is in a fair way of taking a place among garden fruits. We have had, for the first time, a fine crop of the *Improved High-Bush*, of Boston and vicinity, and we are much pleased with it. The bush fairly runs wild with vigor, and bears profusely. The fruit is long, large, jet black, and of a very pleasant flavor. In use the first two weeks of August, following close upon the Raspberries.

*New Rochelle, or Lawton.\**—We have seen accounts in the newspapers, this season, concerning the enormous size and wonderful productiveness of this fruit, which appeared almost incredible. Messrs. GEO. SEYMOUR & Co., nurserymen, of Norwalk, Conn., who grow it largely, sent us a box of specimens; and, although received in a damaged state, we could see that it is really a superb fruit—larger and rounder than the *High-Bush*, of Boston. We have just received the following account of this fruit from Mr. CHAS. DOWNING, who has given it a personal examination. We are happy to be able to give such satisfactory information from a source every way entitled to confidence:

“Having heard a good deal about the *Lawton*, or *New Rochelle* Blackberry, for the past year or two, and knowing that many of the new fruits were over-praised, I made a special visit to Mr. LAWTON’S, a few days since, to see for myself, and I can assure you I was well paid for my trouble. There is no humbug about it; and the only wonder is, that it has not been more generally introduced and propagated before. The fruit is large and sweet. It is an enormous bearer; indeed, the quantity (considering the large size of the fruit) surprised me, and the berries were perfect. Mr. LAWTON informed me that they continue in bearing five or six weeks, and in favorable seasons much longer. He has some two or three acres, and will have plants to dispose of in the fall and spring. The latter, however, is the most preferable time for transplanting. Plant as early as the ground is in good working order.”

**THE CONCORD GRAPE.**—In advance of the ripening of another crop, some of which we hope to see and taste, we have the following letter from Mr. BRECK, which may not be uninteresting to those who have some five-dollar plants of the *Concord* growing:

“You will be agreeably disappointed when you have an opportunity to see it. I saw Mr. BULL’S vines yesterday. He has an enormous crop, probably too many on his vines for their highest state of perfection, notwithstanding he has cut off large quantities of bunches. On two vines he has more than sixty large bunches each, some of them measuring seven and a half inches long by five and a half inches at the shoulder. You could not get them upon a page of your *Horticulturist* at the present time; what they will be when grown to their full size you may imagine, as they have not commenced their last swelling yet; but they will more than realize the description. I have no bunches on my *Black Hamburg* vines in the cold house so large and handsome as I saw on the *Concord* vine. I saw the original vine from which the seedling was obtained; a very great contrast indeed. The wild Grape has small, oval bunches, and when ripe readily drop from the stem; but the *Concord* adheres like the *Hamburg*, and forms a handsome bunch. I consider the *Concord* Grape as one bold stride toward a grand triumph in the improvement that will be made in our native Grapes. Mr. BULL has thousands of seedlings in progress, some of them with foliage resembling the *Black Hamburg*. I look forward with much

\* We shall have a drawing of this fine fruit in our next number.

interest to the result of his labors. The *Isabella* is cultivated by Mr. BULL with the same care that is bestowed upon the *Concord*, but looks mean in comparison. While the *Isabella* was much injured by the winter, the *Concord* was not in the least damaged.\* The *Concord* is most vigorous in its growth, with rank foliage, some of the leaves measuring fourteen inches across. This Grape will be valuable for wine. His first attempts have been quite successful, considering he was ignorant of the art of making it. His great fault has been, I think, in adding sugar to the juice, his wine being rather too sweet for most tastes, but still very palatable and good. His crop will be distributed to horticulturists, and others, that they may see and judge of its qualities for themselves."

PEARS. — We have received the following note from MESSRS. THORP, SMITH, HANCHETT, & Co., together with a couple of very large and beautiful specimens of the *Shenk's*, or *Schenck* Pear, some account of which we gave in our last volume, pages 458 and 459 :

"We send you by Express, this morning, (Aug. 11,) two specimens of the *Hosenshenk*. We wish we could send more, but our number is too limited. We think that after tasting them you will have but *one* opinion in regard to its value, and that that opinion must nearly approximate to, if it does not quite keep pace with, our friend GARBEN's in his note to us accompanying the Pear. He says: "In the *Horticulturist* for July, you remark that you 'look upon it as the best Pear of its season, all things considered.' In this opinion all lovers of the Pear here, where it is known, will coincide. The editor, in his note, says, 'there is a variety of opinions among those who *know it best*.' This is not the fact. I have never heard any person dissent from placing it as *the* best Pear of its season, except Dr. ESHLEMAN, of Downingtown, Pa.; and he, I think, from his own admission, had not tasted a true specimen in full perfection." He says, also, that the fruit is somewhat knotty, which we can corroborate fully, as compared with the specimens we received last year. We hope they will arrive in good order, and we shall be pleased to have your opinion of them."

The specimens referred to were large, three inches each way; roundish; greenish-yellow, the sunny side marbled with light red; the flesh a little coarse, but melting, very juicy and sprightly; but in every piece we tasted, there was one or more crude hard particles about as large as peas. But for this defect, which we presume was accidental, we should pronounce these specimens *first rate*. Dr. ESHLEMAN has been referred to in the foregoing note. We have a recent letter from Mr. E., in which he says, "In most parts of Lancaster county it is a very good Pear, but here (Downingtown, Chester Co., Pa.) after its fifth fruiting it must be discarded. The *Ott* and *Tyson* are both in perfection, and a tree of either would be worth a plantation of *Shenks*." We have some doubts of its being as fine in other parts of the country as in Lancaster county, but it is well worthy of trial. We hope it will soon be tested in our State. The specimens so far noticed have been grown in its native locality.

Mr. FRANCIS DANA, of Roxbury, Mass., has been very successful in raising seedling Pears. Mr. HOVEY says that three or four of them are among the best of our American Pears, and one in particular surpasses even the *Seckel*. This is enough to excite the curiosity of Pear-growers.

\* The thermometer fell to 25° below zero, last winter, at Concord.



THE PEACH PLUM.—We have a large tree loaded with this magnificent Plum. It ripens close upon the *Jaune Hative*, early in August here, and although not of the finest quality, is so large and so handsome, and so early, that it should be much more extensively grown. We must give it a place among our colored drawings.

THE STANWICK NECTARINE.—This famous fruit, which for a time was one of the wonders of the day in England, has in a great measure failed there, no doubt from the want of sufficient heat. We have always thought that our warm summers and long, clear, warm and dry autumns, would bring out whatever excellence it possessed. We are glad to learn, by the following note from Mr. MEEHAN, that this season will test it at Philadelphia:

“The *Stanwick* Nectarine has fallen into bad repute in England. It does not ripen well there. From specimens here, it will probably prove a most valuable addition to American fruits. I put it into the forcing-house the first week in January, and now, (middle of July,) though Peaches, Nectarines, Grapes, Figs, &c., started at the same time, are ‘ripened and gone,’ the fruit of the *Stanwick* is hard and green, and will probably require three weeks to ripen. They now measure eight inches in circumference; and I have no doubt that when ripened under favorable circumstances, they may be had ten or even *twelve*. It is difficult to get Nectarines in our latitude after the beginning of September; here we shall certainly have a large and fine one a month later, but of the quality—more anon.”

## A CHAPTER ON SEEDS.

BY THOMAS MEEHAN, PHILADELPHIA, PA.

THERE are probably few branches of horticulture so ill understood as the management of seeds. A package of seeds may be placed in the hands of two men, divided between each, and sown by each in his own peculiar way; and while one succeeds in raising plants, the other fails. Sometimes the individual who succeeds in raising some particular seed one season, will himself fail in another, though to all appearances the seed was gathered, preserved, and treated exactly in the same manner. For want of attention to these variations and their causes, many erroneous notions respecting the vegetative powers of seeds have arisen, and many contradictory statements made by various writers, which needs only a slight reflection on the principles of successful seed-saving and sowing to reconcile. For instance, some old writer, I think HANBURY, asserts that seeds of the Sweet Gum (*Liquidambar styraciflua*) will germinate the same season of sowing; while another old writer, I am not certain, but think PHILIP MILLER, flatly contradicts this, satisfied that they will not grow under two years. Succeeding writers have followed the one or the other, according to their own observations or taste; and to this day I am not aware that it is generally known that *both* are right to a certain extent. I might instance many such cases. I could name a man in a western State, whose business reputation is actually not in the highest standing with some of his eastern acquaintances, because he was unlucky enough to

observe that *he* had no difficulty in raising in the same season Peach trees from stones sown in the spring, without previously cracking them; and yet any man may do the same for himself,—he may raise either Sweet Gums or Peach trees in either one year or two, and yet in either case sow the seed in the spring of the year. We have only to understand two things: 1st, What preserves the vitality of seeds? 2d, What induces their germination?

The vitality of seeds is an interesting study. There is probably no inherent reason why any kind of seed may not be preserved sound to an indefinite period. Wheat and other cereals which have been taken from Egyptian tombs and monuments, in which they had been enclosed hundreds of years, have readily germinated. In newly plowed-up pastures, which may have lain unbroken many years, we constantly see myriads of Rag-weed (*Ambrosia artemisiifolia*) springing up from seed which must have lain dormant during that period. The St. John's wort (*Hypericum perforatum*), Hedge Mustard (*Sisymbrium officinale*), and the Wild Carrot, are also familiar examples, puzzling to many of our "farmers," who can scarcely be made to believe that they are not "natural" to the soil, springing spontaneously and equivocally therefrom. It is recorded that in some countries the *Sinapis arvensis*, a kind of Mustard, most generally springs up in clay taken from very deep wells; and a few years ago I saw it stated, in one of our Patent Office Reports, that the Great Yellow Mullein (*Verbascum thapsus*) commonly made its appearance after fires on the prairies. Yet the seeds of all the plants I have mentioned, under ordinary circumstances, germinate in a few weeks, and some of them even in a few days after sowing.

There is another class of seeds which preserve their vitality to irregular periods, without any extraordinary intervention. The seeds of the Cucumber and Melon will keep fresh so long, that gardeners say the longer they are kept, the better they are; which, if true, would render them of remarkable value by "the end of the world." Nevertheless, they certainly will keep fresh a great many years. The Turnip, the Balsam, or Lady Slipper of Philadelphians, and the Parsley, are instances of easy vitality, though of a few years less than the Gourd tribe; while the Onion, Spinach, or Lettuce, will seldom germinate over one year.

In all these cases, their preservation is owing to their not being in a position to admit of the mechanical action of heat and moisture in preparing their integuments, or outer coverings, for the chemical action of the elements conducive to germination—an explanation that will be better understood after we examine what induces germination. It will be sufficient here to remark that the vitality of seeds is entirely dependent on this relative position of heat and moisture. Some seeds require more moisture than others to tempt them to germinate; others must be indulged with more heat than water, in comparison: but every kind of seed requires its own due proportion of each. Seeds of many plants, as the Water Lilies, will only grow in water; and of these, some, as the *Victoria*, must have an accompanying degree of heat of over 70°, while our Yellow Pond Lily will germinate at 55°. Other plants, as the Balsam, Thunbergia, Globe Amaranthus, &c., will readily grow in comparatively dry soil. In this class the same difference in the required degree of heat is apparent as in the last

class; for while the Indian Mallow (*Abutilon avicennæ*) will not germinate unless accompanied by a heat of over 60°, the garden Speedwells (*Veronica arvensis*, *V. Buxbaumii*, *V. serpyllifolia*, &c.,) will readily appear through the soil with the heat anywhere above 32°.

A knowledge of the separate requirements of each seed constitutes practical talent, and this can not be acquired without extensive experience and observation; but, a few principles can be derived from these, which will do much to simplify the labors of those who have to go over the same ground.

I have said that heat and moisture act mechanically in the process of germination, —and they do so in this manner: On the application of heat, the pores of the skin are expanded in the outer case or husk of the seed; into these pores moisture is admitted; and then commences the chemical action which is to effect its germination. An element of the water, which chemists call oxygen, seizes on one of the elements of the husk, carbon, the charcoal principle, and forms a new combination, and disappears in the shape of a gas, carbonic acid, one of the chief sources of food for the young plant as soon as it shall have produced perfect leaves. As soon as this combined force has *eaten* its way through the husk, it has to perform a similar duty for the “kernel” inside. When this portion of the seed has been in like manner operated upon, it receives its commission to go forth, increase, and multiply, and in short take upon itself all the duties and responsibilities of a living plant.

“But you have said nothing about air. Heat, air, and moisture, are frequently written of in treatises on germination. What office does air hold in the process?” None whatever, my good friend. Air is a positive injury in the case, though of immediate importance directly after the pushing of the embryo. Air, in conjunction with light, hardens the outer coat—chemically speaking, fixes the carbon—which it is the object of germination to destroy. I have no doubt seeds would “swell” in distilled water, though I can think of no direct experiment of the kind just now; but even water plants must send their true leaves to the surface in search of air, immediately after germination.

All these principles teach us that in preserving the vitality of seeds, or in accelerating their germination, a great part of our attention has to be directed to their outer coverings. Seeds can not lose their vitality while these remain perfect, while they will be in a condition to vegetate whenever this covering is prepared to admit moisture. The different results in the experience of different parties in the time required by certain seeds to grow, is entirely dependent on this. If A preserves his seed during the winter so that the husk becomes hard and bony, while B guards his from such a contingency, the latter will arrive at much more speedy results than the former. Let us take an example: the Sugar Maple will do. A gathers his at the fall of the leaf, preserves it in a dry seed-room, sows it in the spring, and—it does not come up till twelve months afterwards. But B gathers it at the same time, puts it in the ground at once, and gets fine plants the next season; or, he gathers his seeds by the *end of August*, saves them in a cool room till spring, sows them, and then gets plants also “right away,” in either case getting ahead of his neighbor. “But where is the



difference?" Simply that B never allows his seeds to get hard. He places them in the ground to keep their shells soft; or, to the same end, he gathers them, not before their embryos are fully formed, but before their coats have become indurated, and adds to his precaution by keeping them cool till sown. This is a simple experiment, which any one may test for himself.

In successfully raising seed, there is more in this gathering of them before they are what is popularly called quite ripe, than one is at first disposed to admit. I was many years ago struck by this through accident. On a visit to a friend, he pointed out what he then considered extremely rare, a most beautiful double orange African Marigold. My friend wished to keep it to himself,—he would give no seed, but he presented me with a flower. When this flower had faded, and was cast aside, seeing the seed looked black and good, I saved them, and at the next spring's sowing I sowed them at the same time with the yellow, which we had. They appeared several days before the others. Simple as this was, it led me to ponder on what we gardeners had always held inexplicable, namely, that on sowing Hawthorn seeds some should come up in one year, while, of the same sowing, some should not appear till the second or third year; and I have since been led to the conclusion, by many similar observations and experiments, that those which came up first were "greener" when gathered than those which took a longer period.

At the risk of being a little "dreadful" in long narrations, I will detail a few observations on the *Victoria* seed, which bears well on the present subject. The seeds received from England by Mr. COPE, through Mr. DOWNING and Sir W. J. HOOKER, readily germinated. Those which ripened at Springbrook in September and October the fall following, also readily grew any time through the winter, on being sown for a few weeks. Our plant was flowering all that winter and spring, and in the summer I set myself to collect a good quantity of well-ripened seeds, but they were too fast for me, bursting and sowing themselves. Subsequently I cut one off before it was ripe, or at least before it burst open. These were put in an old wine bottle, and many of those self-sown were raked up with a net and placed in another bottle, which chanced to be a white-colored one. They were all placed in the same place. Those in the black bottle grew in a few weeks, *in* the bottle. Looking alone at the known influence of the absence of light in assisting germination, I took that to be the cause; but last year the circumstances were repeated in every respect except that the bottles were reversed, and with the same result except that the seeds which grew this time were in the light-colored bottle. This seems confirmatory of what I have advanced in favor of seeds not seemingly ripe; but the *Victoria* still further "confirms this confirmation." The well-ripened seeds, by Mr. COPE's liberality, were distributed over the whole Union; but, with one instance, I believe, excepted, failed to grow. Even in our own tank I could never succeed in raising one of these so-ripened seeds, except in February, March, or April, after they had lain a very long time in pans; and those which were self-sown in summer, never appeared any season till the following spring, when they would all appear simultaneously. Last year, warned by these observations, I sowed all the seed in the latter part of the season, and before they were quite ripe;

and I am informed that this season no difficulty whatever is experienced in raising seedlings in a few weeks, whenever wanted.

So much for saving seed which we wish to germinate readily. But let it not be forgotten, that if we wish to preserve seed safe and sound to a remote period, the reverse of this must be aimed at; that is, the riper the seed can be obtained, the better. Now, supposing the seed come to hand dry and hard, perhaps from some foreign country — perhaps old, or perhaps from having been preserved only for a few months in an old coat pocket, seed chest, or some other dry, warm place, — how are we to proceed? Still look to the softening of its shell. Suppose, for instance, we have a barrel of Peach stones to sow at once some spring, which perchance have been stowed away during the whole winter in the dry store of some dealer. What shall we do; crack them? Yes, that may do, but it is a tedious operation — can't afford so much time; can do for them in a better way than that. Lay them anywhere aside thinly. To-day, with a water-pot, pour boiling water on them; to-morrow let them dry; the next day again pour boiling water on them, as before. Several successive days of this treatment will do. Another way is, to expose them anywhere to a heat of 100°, or thereabout, for a few hours; afterward pour cold water on them; then dry them again. Repeat the operation a few times, and you may easily have Peach trees the same year from stones sown in the spring. We have over a quarter of an acre on our Bethlehem road nursery, from seed sown this spring under the latter process. This mode of softening shells is adapted to any kind of hard, bony seed. The heat expands the pores, the moisture enters, and the work of a whole winter's freezing is effected in a few days.

There are many kinds of seeds which have not exactly "shells" for protection, but which nevertheless get pretty hard coverings, if once allowed to get dry. Many of the sterculiaceous and leguminous plants are of this description. I have seen, of the former tribe, seeds of the Hand-plant (*Cheirostemon platanoides*) remain three years perfectly sound in a pot, resisting every attempt of change of heat and moisture to get them to germinate; when a simple soaking in boiling water for a few hours, on their arrival from Mexico, and for a few hours before sowing, would probably have caused them to spring up in as many days. Boiling water is very efficacious, poured over such seeds, and left thereon a few hours; or where there is any objection to the use of such hot assistants, though I have never found it to hurt anything, the seeds may be steeped for two or three days in cold water. I have raised *Virgilea lutea* from hard and dry seed in this manner in a few days, after being gathered ten months. Alkalies, acids, and various preparations, have also been used with various success in softening the integuments of seeds. I do not myself value any of these means much, believing as I do that a proper and judicious employment of heat and moisture is abundantly sufficient for every purpose.

I think I could add much more of interest on this interesting subject, but the intense heat and my numerous engagements make me feel that I have said enough for once; and I venture a guess, on looking over my pages, that the editor himself will have good cause for coming to the same conclusion. I will therefore finish by

recapitulating, that seeds may be preserved to any length of time, "safe and sound," by so regulating heat that it shall not abstract the moisture from the outer coat, and so regulating moisture that it shall not rot it; and that seeds may be made to grow at any time, by so gathering and preserving them that the outer covering never becomes absolutely hard; or, if once become hard, employing variations of heat and moisture to soften it.

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## TRANSPLANTING KALMIAS AND RHODODENDRONS.

BY WM. SAUNDERS, LANDSCAPE GARDENER, GERMANTOWN, PHILADELPHIA, PA.

It is universally acknowledged that there are not two more beautiful evergreen hardy shrubs than our native *Rhododendrons* and *Kalmias*. It is equally a matter of fact, that although they form a principal feature in the composition of European pleasure grounds, they are rarely seen in our own, and their real beauty and adaptability for cultivated shrubberies are as little known as the rarest plant of foreign climes. The efforts that many enthusiastic cultivators have made in introducing all the best foreign varieties of fruit and ornamental trees and shrubs are highly commendable; but, as the late Gen. DEARBORN once remarked when treating on a similar subject, we should "first look at home and direct our attention to the beautiful, the grand, and the valuable, and endeavor to procure afterwards whatever may be found better or useful in other regions of the earth." I think we are at fault in overlooking those plants that are so highly valued in every country but their native one, and neglecting the good that is within our reach for something that is supposed more valuable merely because it is more difficult of attainment.

This antipathy to native plants has frequently been dwelt upon by writers on horticulture, and has as frequently been met with the answer that they cannot be cultivated without great expense and labor in preparing beds of suitable soil, selecting particular locations, watering, mulching, &c., and after all the plants never attain that healthy luxuriance they possessed before removal. It is the opinion of many that the plants under consideration require a certain kind of peaty soil called by some "laurel earth," which is to be found in deep ravines and swampy spots, without which it is utterly useless to attempt their cultivation. If we investigate the subject we will find that there is no reason for incurring all this unnecessary expense in the preparation of soil. Both the *Rhododendron* and *Kalmia* are found in all situations, on clayey slopes, in swampy marshes, on rocky knolls, and even in crotches of trees, under conditions similar to the *Orchidæ* of tropical regions, and I have cultivated them under glass, in connection with *Maxillarias* and *Stanhopeas*, on blocks of wood, and in rustic baskets. When the epiphytal species of the Sikkim Himalayas were first announced, European botanists considered it quite startling that the genus should assume that habit. Had they been familiar with the nature and adaptability of the American species, their surprise would not have been so great, and it affords us another proof of the scantiness



of information so important to practical cultivators — viz., the physical conditions and local circumstances under which plants are found in their native habitats, as an auxiliary to their artificial treatment.

All plants that form fibrous roots similar to the *Kalmia*, never run deep in the soil; they ramify and spread a net-work of fibres on the surface among the decaying leaves and vegetable matter annually deposited. Hence, we may infer that there is no necessity for forming deep preparations of any particular soil for their culture; and further, that if transplanted in the ordinary mode adopted with ornamental trees, a weak growth and premature death might be anticipated, since the roots would be placed out of the reach of those atmospheric gases so necessary to their development.

Within the last few years I have removed many hundreds of these plants of all sizes, from six inches to sixteen feet in height, and from three to thirty years of age, and transplanted them in shrubberies without discrimination as to exposure or locality, and have not had a failure of more than five per cent., and these principally where the roots of neighboring trees deprived the plants of sustenance during dry weather. No regard was paid to the nature of the soil, but in all cases it was deeply loosened up with the spade in order to suspend a supply of moisture that would be available in extreme drouth; the ground being left loose and level on the surface, is then in a proper condition for the reception of the plants.

In the selection of the plants I prefer those growing in open exposures in the woods, rather than those under the deep shade of trees, the former being of a more bushy and desirable habit and growth, and furnished with a better supply of roots. A circle of sufficient diameter to inclose a suitable quantity of roots is cut round the plant, which is then easily brought up by skimming underneath with a spade. Very little attention is given to secure a ball of earth, since it is quite useless, because the roots do not penetrate many inches from the surface in ordinary cases.

We come now to planting, which I particularly wish to notice. I am convinced that to improper planting, rather than to any other cause, may be attributed the many failures in attempting to cultivate these plants. My method is not to plant them *in* the soil at all, but simply set them down *on the surface*. A sprinkling of soil is scattered over the roots, principally about their extremities, to be washed in by rains. They should always be planted in masses or clumps, as being much more effective than single specimens; they can also receive more attention during summer in the mulching or covering the whole surface of roots with short lawn grass, leaves, &c. During the first season after removal, they may occasionally require artificial waterings; but if the soil is deepened properly previous to planting, and attention paid to keeping the roots covered, they will not require much further care.\* In the fall, a covering of leaves five or six inches in depth should be thrown over the roots, to decompose and form a rooting medium for the young fibres, similar to what is provided for them in their native woods. It is this annual surface deposit that affords nutriment

\* In the spring of 1852, while engaged in removing *Kalmias*, I lifted a very large and fine specimen which could not be placed on the wagon at the time. Thinking to get it at an early day, I left it on the surface, merely throwing a few handfuls of leaves over its roots. On commencing operations the next October, I came across this plant quite healthy, although it had been exposed all summer. This shows them to be very tenacious of life.

to the plant, and hence we see the error of deep planting, and their healthy growth on all soils and in all situations. Even on rocky surfaces the roots penetrate the numerous crevices of the rock, and receive nourishment from the decay of leaves and vegetable matter, which the descending rains convey to their utmost extremities. They descend deep into these fissures, because atmospheric gases are not impeded; but cover these tender fibres with five or six inches of close, compact soil, and their further extension is completely arrested.

I may, on some future occasion, present my views with reference to the introduction of undergrowth shrubs in ornamental plantations. The common-place, *one-idea* system, of dotting over a certain portion of ground with trees at regular distances, is becoming so prevalent, that it is time some characteristic feature should be attempted, in order to break up the monotonous, formal aspect, produced by this method of planting.

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## THE POMOLOGICAL DEPARTMENT AT COUNTY AND STATE FAIRS.\*

BY THOMAS M. COOLEY, TOLEDO, OHIO.

A CONSIDERABLE number of our cities and villages boast Horticultural Societies, whose efforts in behalf of pomology are traceable in an increased knowledge of that science, and an improvement in its practice, in the country immediately surrounding the places at which they are located. For the most part, these societies are not organized for a large territory, the number of their members is not expected to be large, and the attendance at their weekly or monthly meetings is not too great to permit of each person examining all the fruits presented, and becoming acquainted with the appearance if not with the flavor of each. As yet, however, the agricultural community a little removed from towns have not thought it worth their while to organize such societies, and to meet the want of them a pomological department has been added to almost all the yearly State and County gatherings now commonly designated "Fairs." As it is upon these that farmers are to depend principally, for a long time to come, for such aid in acquiring a knowledge of fruit-culture as organized effort can give them, we propose to glance briefly at the mode in which the pomological exhibition is made at these fairs, and to point out a few particulars in which, in our opinion, the value of that exhibition might be materially increased.

Let the reader take a walk with us through the building devoted to fruits, at one of these State Fairs. Extending all around the building are long tables, upon which exhibitors have arranged their fruits, labeled with names, or numbers, or not at all, as suited their respective fancies. In front of these tables is placed a railing, to protect them from the crowd of visitors; and behind that the exhibitors, if they happen to be nurserymen, station themselves to improve the opportunity of advertising their wares.

On examining such of the fruits as are labeled with names, we are surprised to find

\* This article was sent us *after* the exhibitions of 1853, and we thought it better to defer its publication until the subject discussed would be again before the public. It should have appeared last month, but is seasonable yet.



so many of the names wrong. Here is the *Baldwin* under the name of *Hubbardston Nonsuch*; the *Herefordshire Pearmain* and the *Rambo* both labeled *Seck-no-further*; the *Green Newtown Pippin* designated *Rhode Island Greening*; the *Wolcott* mistaken for the *Red Gilliflower*; and red Apples of various sizes, shapes, and flavors, which the exhibitors seem determined to crowd into the already extensive family of *Spitzenburghs*. With the Pears it is, if possible, still worse; for *Bell Pear*, *Butter Pear*, *Pound Pear*, and *Virgalieu*, seem to be generic names under which a hundred different species having little apparent affinity are classed by their growers. It unfortunately happens that with some of the varieties which we find honored with duplicate names, we are wholly unacquainted; and a part of the inducement for our coming hither was to acquire some knowledge of them that would at least enable us to recognize them when we met again. A few new varieties, promising great excellence, have also been originated in the region where this fair is located; but though we have strong reason for believing that they are exhibited here, we look in vain over the tables for their names, and are compelled to an uncertain search for them among the unnumbered and unlabeled ones. We had been told that we should also see at this fair fruits from four degrees of latitude and eight of longitude, and we had anticipated great pleasure and much instruction from a comparison of the different specimens presented, and a study of the various peculiarities induced by differences in soil, climate, and situation; but though the professional exhibitors have some of them taken the pains to affix their cards over their entries, in many cases after diligent inquiry we are unable to ascertain, from the entry tickets or otherwise, where the fruits were raised, or anything of the climatic or other influences which have affected them. Indeed, we learn, on inquiry, that the name and residence of the exhibitor are not allowed to be placed on the entry ticket, lest dishonest judges might give partial decisions; while it never seems to have occurred to the managers that exhibitors who cared to have the fruits of their raising known have many ways of making them known aside from using for that purpose the tickets they receive from the Secretary. The committee on fruits are alone able to render us any essential aid in this pursuit of knowledge under difficulties; yet, except the time when they are engaged in the discharge of their duties, it is quite as easy to obtain without their assistance the information we desire, as to find the members of this committee.

It will not be surprising, therefore, that we return home from this exhibition but little wiser than we came, and fully impressed with the belief that though State fairs may be valuable to committeemen, and afford them a fine opportunity of becoming familiar with the fruits of the State, yet to the public at large this portion of the show is about as valuable as if the tables had been loaded with stones instead of Apples and Pears. But we are more than ever convinced of that fact, when we see the report of the committee published among the transactions of the Society; for though they have taken pains to inform us that they have awarded premiums in due form for the best single variety, and for the best three and six varieties of fall and winter Apples and Pears, they have not thought it worth their while to inform us what they have adjudged the best varieties, and the people who cultivate the *Black*



*Gilliflowers*, the *Pennocks*, and the *Monstrous Pippins*, in their ignorance of any better Apples, may cultivate them in the same ignorance forever, if they are to depend upon this Society for enlightenment.

The State fair which we have supposed, is a sample of many State and County exhibitions; and though not of all, yet many of the objections stated will apply with force to almost any of them. Let us recapitulate these objections, with suggestions for their removal.

1st. It is a mistaken policy, we think, to endeavor to conceal the names of exhibitors. It is so, first, because it fails of its object whenever the exhibitors see fit to disclose themselves to the committee; secondly, because a part of the interest we take in any production is connected with the name of the producer and his reputation in that department; and thirdly, because fruits are varied so much by climate and other incidents, that a knowledge of the place where they grow is absolutely necessary to enable us to judge correctly of them. (1)

2d. Exhibitors should never be permitted to leave their own labels upon fruits, unless the committee on examination have found them correct. The incorrect labels confuse and mislead the public.

3d. Competent persons should be designated to stand by the fruits, to inform those desiring to know about names, qualities, &c.; or, if that should be found inexpedient, all fruits should as far as possible be correctly named, and be labeled with the name and residence of the person growing them.

4th. Committees, in awarding premiums to best varieties, should invariably give names, so that those who depend upon them for information may know what are considered best varieties for cultivation in the region in which they live.

5th. Fruit committees ought to report a *condemned list* of such fruits unworthy of cultivation as are presented for examination. We might thus hope that some of us would live to see the culture of such noble looking but worthless fruits as the *Pennock Apple* (now met with everywhere) discontinued.

And, in conclusion, the necessity for any pomological department at such fairs should be done away with as soon as possible, by the organization of town or district horticultural societies, that should hold weekly meetings, and thus make their members familiar with the fruits of all seasons. The present system is but a poor substitute for such societies, and its continuance should be as brief as the lovers of good fruit can possibly make it.

[1. We believe strongly in the propriety and *necessity* of prohibiting the names of exhibitors from being attached to their fruits until the committees have made their awards. Committees, though meaning well, without the slightest intention to be partial, are very frequently so when they know the names of exhibitors. A person's reputation will induce the idea sometimes that his fruit is really better than it is. Sometimes a committee will sympathize with the exhibitor, and say "he ought to be encouraged," &c., &c.; but when no names are to be seen, the committee are of *necessity* confined to the simple question, *the merits of the fruits*. But then we

would have all committees to make their examinations and awards *before* the exhibition of fruits is thrown open to the public, and then exhibitors should be allowed to place their names upon the fruits, and give as much publicity to it as possible, and all the prize collections and articles should be conspicuously so designated.

To the other propositions we give our cordial assent, and commend the whole article to those who are about to take a part in the direction of exhibitions.—Ed.]

## DRYING FRUIT.\*

It has been observed that the amount of Peaches consumed in a single week in the city of New York, exceeds the total consumption of fruit in Great Britain throughout the entire year. The sales of perishable fruits are rapidly increasing throughout the country; but there is one serious drawback to their extensive cultivation—that is the necessity of crowding them into market at the critical period of their maturity, so that twenty-four hour's delay shall not witness their destruction by decay and fermentation, and result in their total loss. Hence the immense superiority in this particular, of long-keeping sorts—which may be deliberately secured and held in market for many months, till the best time shall be selected for their disposal.

But there is another important avenue to market for the perishable fruits that is at present almost unknown in its perfected form. We allude to preservation by drying. Every farmer *thinks* he has seen dried Apples and Peaches, but not one in a thousand has seen them—properly so called. That which usually appears under this name, consists in the first place, of a selection of such inferior, poor-flavored fruit, as can be used for nothing else; this is imperfectly pared, leaving a due proportion of skin and core remaining, and is then variously subjected to partial decay, smoking, drying, &c., forming when completed, a singular medley of all colors, from brown to nearly black, and with nearly as various an intermixture of flavors. Those who wish to see dried fruit in perfection, must remember that a poor-flavored sort before drying, can never by any ingenious process become finely-flavored afterwards. The very finest varieties must therefore be first chosen. The process of drying must then be so rapid that no decay nor even discoloration shall take place until the operation is completed. Our climate is too precarious to think of drying fruit properly in the open air, even for the earliest varieties. Some artificial arrangement for the purpose must therefore be devised.

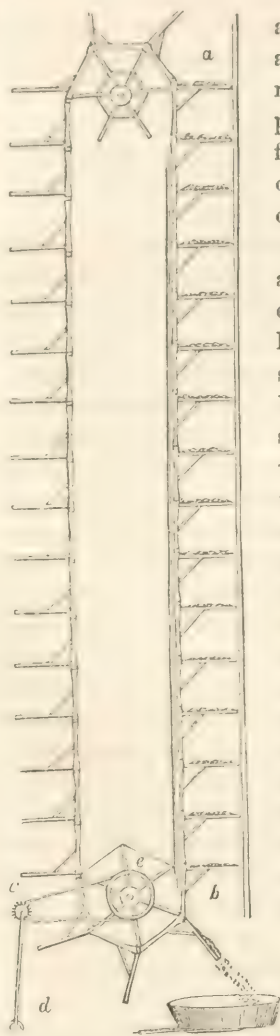
The great leading defect of all the plans we have seen for drying by fire-heat, is a *want of circulation in the heated air*—a deficiency in rapid ventilation. A high temperature is given by means of stoves to a close apartment, the air of which in a few minutes is heavily charged with moisture from the fresh fruit, and a sort of steaming, stewing, half-baking process then commences, producing after a long delay, an article far different from that of a perfectly dried, finely-flavored fruit. A free circulation of

\* From the *Country Gentleman*.

air, kept dry by a continued fresh supply, would accomplish the work in far less time, and at a much lower temperature; and consequently retain in an incomparably more perfect manner the original characteristics and color of the fruit.

In order to make a beginning in this matter, and to assist in the erection of good, cheap, rapidly-operating, and perfect fruit drying establishments, we present to our readers a figure and description of an apparatus for this purpose, which, although never patented, we believe to be far more valuable than many machines not thus thrown open to the public. Its peculiar advantages will be obvious as soon as the description is examined.

It consists of a tall upright shaft, *a b*, represented in the annexed section of the apparatus, through which passes an endless chain, made of a number of strong frames, securely hinged together at their corners. This chain should be strong enough to bear several hundred pounds without breaking. At every joint it is furnished with a braced shelf, each consisting simply of a square frame furnished with coarse twine-netting, like a sieve. This endless chain with its series of sieves runs over an angular wheel above and another below, precisely like those of a common chain pump, but wide enough to receive the full breadth of the chain. Its motion is quite slow, descending from *a* to *b* on one side, and rising on the other, and is accurately regulated by means of the pendulum *d* connected to the notched wheel *c*, by means of an escapement like that of a common clock, but made very strong. A strong and broad India-rubber band connects the axle of this wheel to the drum *e*, on which the chain runs. As the chain is loaded with the drying fruit, and is therefore quite heavy, it must not, and indeed can not, be subjected to the successive vibrations of the clock-work, these vibrations being broken and destroyed by the India-rubber band.



The whole apparatus being ready for operation, heated air from a stove and drums is made to pass up through the shaft *a b*, being let in at the sides at *b*, and confined to this shaft by the drum *e* being made tight, and fitting closely without touching in its revolutions. A person with freshly cut and pared fruit stations himself at *a*, and as each successive shelf or sieve slowly descends, spreads a single layer over them. They operate like the weight of a clock in keeping up the motion of the pendulum; and the velocity of their descent is accurately regulated by means of the relative sizes of the wheels placed on the axles of *c* and *e*, and also, if necessary, by using different lengths for the pendulum rod.



The great advantage of this contrivance is the following: The dry and freshly heated air first enters the bottom of the shaft at *b* and strikes the fruit when the drying process is nearly finished, and completes it; as this air rises, it receives additional portions of moisture from each successive shelf, until finally it passes off at the top, —the driest portion being needed at the bottom, to complete the process, and those most charged with vapor only coming in contact with the freshest fruit at the top, where only it could be useful.

The velocity must be so regulated, by experiment. (according to the height of the shaft, heat of the air, and time required for drying.) that the drying process shall be just completed by the time the fruit reaches the bottom, where it drops off from the revolving shelves into baskets or boxes placed there for this purpose.

This apparatus may be placed in a tall narrow building erected for the purpose, and built cheaply by vertical boarding on a wooden frame, to the whole of which a handsome architectural exterior may be imparted by giving it the aspect of a square Italian tower or campanile.

An apparatus of this sort will dry fruit with great rapidity, certainly, and independently of the most unfavorable changes in the weather; and it will come out white, clean, and perfectly dried, retaining all the peculiar flavor of the fresh fruit, and prove incomparably superior to the common half-decayed, smoked, imperfect article. When known, such dried fruit must command almost any price in market. Drying establishments, well managed, would give a great impetus to Peach planting in this country; and we unhesitatingly predict a large trade in the finest dried Peaches in European markets, to which they can be so cheaply and safely conveyed, and where, as fresh Peaches cannot be easily obtained, they cannot fail to be very highly appreciated.

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## STRAWBERRIES.

BY A. S. N.

As the season is at hand when many persons will plant Strawberries, I hope I shall not be thought to offer unnecessary advice, if I make a few suggestions on Strawberry culture. On most horticultural topics, the mass of your readers have less rather than more *practical* knowledge, than is generally attributed to them. They need instruction “line upon line.” I know this has been and is still the case with myself.

One of the first requisites for the successful culture of the Strawberry, is a deep soil. If you can devote to it only a small patch of ground, a rod or two square, do not begin by raising a bed *above* the adjacent ground or walks, rather let it be *lower*; as another requisite in the cultivation of this fruit is sufficient moisture, and when the bed is *raised* the plants suffer from every drouth. As a general rule, it will be best to select for this fruit the lowest part of your garden. Many of your readers must have observed that Strawberry plants have a great tendency to “get up in the world;” that is, the plants get out of the ground two or three inches, and are dried up. By

planting them in the lowest part of the garden, they not only get more benefit from the rains, but the natural washing down of the soil will counteract the tendency I have mentioned.

No manure, unless thoroughly decomposed, should be applied within six inches of the surface of the soil for several months before planting your Strawberries, as the dryness occasioned by this manure will seriously injure your plants.

If your bed is small, and you wish to raise the largest possible quantity of fruit from it, and will give it the necessary attention, set the plants about four inches apart in rows a foot asunder, three rows making a bed. There should be a walk two feet wide between the beds. In this method the runners must be cut off, and the earth kept loose between the rows. The weeds will also trouble you, but with proper attention a large amount of fruit may be gathered.

You may thin out your bed by removing the old plants, after a sufficient number of young plants have struck root to serve for the next year. Or, you may, immediately after the fruit is gathered, spade in alternate strips of three feet wide, and when these strips have become covered with young plants, spade in the old ones; and so renew your bed annually. I am here recommending what others have frequently recommended.

For three varieties to cultivate in this manner in *this* region, I should choose *Burr's New Pine*, an early variety, of good size, excellent flavor, and very productive; *McAvoy's Superior*, a large, productive, and good berry; and, as a fertilizer, as well as an excellent berry and very productive, the *Large Early Scarlet*. But if you wish for Strawberries that will "take care of themselves," or require little attention, plant *Crimson Cone*, *Cincinnati Hudson*, and especially *Dundee*, with a few *Large Early Scarlets* as fertilizers, and let them run over the ground. There are of course many other excellent varieties beside those I have mentioned, and among them may be named a new kind originated at Rochester, N. Y., called *Monroe Scarlet*. I have found it a good fruit, a vigorous grower, and uncommonly productive.

If, instead of a small patch in the garden, you have a quarter or an eighth of an acre to be planted, put your plants two in a place, in hills eighteen inches or two feet apart, and the rows two feet and a half apart. Cultivate as you would corn, cutting up the runners as you would weeds.

For mulching, especially when the plants are in drills or rows, as first mentioned, I have tried nothing so good or so clean as straw cut short as for feed; and when it decays, it is of value to the soil instead of being injurious, like tan. As a top-dressing, in addition to leached ashes, use leaf-mold or rotted turf. Swamp muck or peaty earth, dried and mixed with sand, is an excellent top-dressing where the soil is clayey.

Your correspondent "T.," in the *Horticulturist* for June, asks for information relative to the value and use of tan-bark for mulching Strawberry plants, and as a winter covering for them. A few years since, tan was extensively used in this vicinity, both for covering Strawberries and as a mulch for dwarf Pears and other trees and shrubs, in consequence of the commendations of your predecessor, Mr. DOWNING, and of the qualities attributed to it by Prof. MAPES. The latter gentleman, I think, asserted that

"tannic acid is a specific manure for Strawberries," improving their *flavor* if not their size. Indeed, I think something was said about toads being able to distinguish Strawberries where tannic acid had been used, from others. But tan *here* has had its day, and its use is now universally "voted a nuisance." As a mulch for Strawberries, it is a dirty article, when wet staining the dresses of females while picking the berries. For a winter covering it is no better, to say the most of it, than straw, forest leaves, or saw-dust, either of which can usually be as easily procured as tan. If used as a winter covering, it is much more trouble to remove it in the spring than straw or leaves. As to its effects on the soil, if spaded in, on a stiff *clay*, it may not, as you suggest, "do any harm," while on all other soils I believe it to be decidedly injurious.

As to potash, of which "T." speaks, I believe it is pretty generally understood that leached ashes, if not used too freely, form a good top-dressing for Strawberries, affording all the potash they usually need. Sulphate of ammonia will undoubtedly promote the growth of the plants, but will not necessarily increase very greatly the crop of fruit. I am in the habit of saving all the soot from my chimnies and stove-pipes, on account of the sulphate of ammonia contained in it. This I apply to Strawberry plants and other things, as I judge necessary.

So subject is our climate to drouth, I think no crop would pay better for irrigating than Strawberries; and the cultivator who has water that he can use in this way, will find it to his account in so doing.

## NEW FOREIGN PEARS.

THE following new Pears are described as follows in the *English Gardener's Chronicle*, by M. DE LIRON D'AIOLES, of Nantes. Several of them—such as *Beurre Clairgeau*, *Nantais*, *Duchesse de Berry*, *Conseiller de la Cour*, *Bon Gustave*, *Josephine de Malines*, &c.—have fruited in this country, and proved to be valuable. M. D'AIOLES descriptions are the most complete we have met, except of the few described in the *Annals de Pomologie*.

*Beurre Clairgeau*.—The tree is remarkably vigorous, and soon forms a handsome pyramid; succeeds well against a wall with a south or an east aspect; bears abundantly, and at an early age. Fruit variable in form, but generally calebasse-shaped; a superb fruit, weighing sometimes twenty ounces. It gained the first prize of the Horticultural Society of the Seine, in 1851. Its skin is fine, almost entirely covered with patches of reddish russet when gathered; but at its full maturity, which occurs in November and December, it becomes richly colored with yellow and vermillion. Its flesh is fine, white, melting, very juicy, sugary, and perfumed. Raised by PIERRE CLAIRGEAU, a gardener at Nantes.

*Beurre de Nantes*, or *Nantais*.—Tree—vigorous, adapted for a pyramid or for training against a wall; it soon comes into a bearing state. Fruit—large, oblong, of the form of the *St. Germain*. Skin—light green, yellowish when fully ripe. Flesh



—white, melting, very juicy, and perfumed. Ripens in September. One of the most handsome and delicious of the new Pears. It was raised by FRANÇOIS MAISONNEUVE, a horticulturist at Nantes.

“*Beurre Delfosse*.—Tree—vigorous, suitable for a pyramid or standard. Fruit—middle-sized, roundish. Skin—yellowish-brown, slightly tinged with red next the sun. Flesh—white, fine, buttery, and melting; very juicy and sugary, with a delicious, perfumed flavor, somewhat resembling that of the *Passe Colmar*. Becomes fit for use in Belgium in December and January. Raised by M. GREGOIRE, of Jodoigne, Belgium.

“*Bergamotte Hambourg*.—Tree—vigorous, forms a handsome pyramid, and is also adapted for a standard; an abundant bearer. Fruit—large, Bergamot-shaped, from three to three and a half inches in diameter. Skin—rough, green, changing to citron yellow when ripe, dotted with brown, and tinged with red next the sun. Flesh—white, very fine, somewhat buttery, juice abundant, sugary, perfumed like the Rous-selets and Bergamots. An excellent fruit, ripening, in Belgium, in the first fortnight of October. Raised by M. BIVORT.

“*Duc d'Orleans*.—The original tree has a magnificent pyramidal form. Fruit—middle-sized, or tolerably large, obtuse-pyramidal, of a fine golden yellow, profusely sprinkled with reddish-brown and dark specks. Stalk—slender, woody, and about an inch and a quarter in length. Flesh—white, fine, melting, very juicy and sugary, with a vinous perfumed flavor. Season—November and December. Raised by M. ALEXANDRE BIVORT, and bore, for the first time, in 1847.

“*Beurre Six*.—Tree—vigorous and fertile, but requires to be worked on the Pear stock and grown against a wall. It is not adapted for pyramidal training. Fruit—large, pyriform. Skin—smooth, light green, dotted with deep green and brown. Flesh—white, very fine, melting, buttery, and sugary, with a delicious perfume flavor. Its season of maturity is November and December, in Belgium. Raised by M. Six, nurseryman at Courtray.

“*Duchesse de Berry*.\*—This is naturally classed among the Doyennes. In some catalogues it is confounded with the *Doyenne d'Ete*, from which, however, it is very different. Tree—vigorous and very productive. Fruit—middle-sized, somewhat larger than the *Doyenne d'Ete*, or *Doyenne de Juillet*. Skin—smooth, pale green, dotted with brown. Stalk—short and thick. Flesh—white, crisp, juicy, and sugary. Ripens, at Nantes, between the 15th of August and the 15th of September. This variety was discovered by M. BRUNEAU, nurseryman, at Nantes. Among a number of seedling trees at a place called the Barriere de Fer, commune de Saint-Herblain, he observed two trees, the fruits of which appeared to possess merit; to one of them he gave the name of *Duchesse de Berry*, and to the other that of *Saint Herblain d'Hiver*, and introduced them into his nursery in 1827.

“*Saint Herblain d'Hiver*.—The tree does not succeed well on the Quince stock, but on the Pear stock it is tolerably vigorous, and is suitable for standards or pyra-

\* This should be called *Duchesse de Berry d'Ete*, to distinguish it from another Pear lately sold under the name of *Duchesse de Berry*, and which has proved to be the *Uvedale St. Germain*.

mids. The fruit bears considerable resemblance to the *Easter Beurre*, from which it has probably been raised, and at first sight might be mistaken for it. It is of medium size, or rather small when the tree is heavily loaded. Skin—smooth, green, sprinkled with small brown dots. Stalk—short, deep brown. Flesh—fine, white, juicy, and sugary. Although the tree is not so vigorous as many others, yet it appears deserving of cultivation, as the fruit keeps till late in the season.

*"Marie-Anne de Nancy.*—Tree—moderately vigorous, and likely to prove a good bearer. Fruit—middle-sized, turbinate, about nine inches in circumference. Skin—smooth, green, streaked and speckled with russet, becoming yellowish when fit for use. Stalk—scarcely half an inch in length, clear brown, thick, and fleshy. Flesh—white, very melting, and buttery, with abundance of sugary vinous juice. Ripe in September and October. From seed by VAN MONS.

*"Docteur Trosseau.*—The tree bore for the first time in 1848. It is entirely destitute of thorns, which is rarely the case with Pear trees that have recently been raised from seed. Fruit—large, pyriform, broad near the eye and contracted near the stalk. It is four inches in height and three inches in diameter. Stalk—strong and woody, about an inch in length, sunk at its insertion. Skin—green, spotted with red, and sprinkled with gray dots. Flesh—fine, white, melting, buttery, with abundance of sugary perfumed juice. Ripe in November and December. Raised by M. ALEXANDRE BIVORT.

*"Beurre Bretonneau.*—Tree—vigorous, an abundant bearer, adapted for a standard or pyramid. Fruit—as yet variable in form, but generally it is long, pyriform, contracted near the stalk end, four inches in length, and about three inches in diameter at the widest part. Skin—rough, pale green, changing to golden yellow at maturity; the side next the sun is reddish-brown, much dotted and freckled with distinct russet specks. Flesh—fine, yellowish-white, buttery, half-melting, sugary, vinous, and perfumed. Keeps till May or June. Named in compliment to Dr. BRETONNEAU, of Tours, in 1846, by Major ESPEREN.

*"Poire de Tongres.*—The tree is a very strong grower, and succeeds better on the Pear stock than on the Quince. It is naturally pyramidal. Fruit—very large, obovate, four and a half inches in length and three and a half inches in diameter. Stalk—three-fourths of an inch in length, obliquely inserted. The surface of the fruit is uneven. Skin—bronze-colored, changing to a deep brownish-yellow when fit for use; the side next the sun is streaked with red. Flesh—fine, white, melting, juicy, sugary, vinous, and agreeably perfumed. Season—middle of October. Raised by M. DURANDEAU, at the village of Tongres.

*"Josephine de Malines.*—Tree—vigorous, and a good bearer, forming a handsome pyramid, and may be worked either on the Pear or on the Quince stock, and it may be planted against an east or west aspect. Fruit—small from a standard, middle-sized from a wall, obovate. Flesh—fine, buttery, juicy, sugary, and perfumed. Season—January to March. Raised by Major ESPEREN, of Mechlin.

*"La Juive.*—The tree is handsome and vigorous, suitable for forming a pyramid. Fruit—middle-sized, turbinate. Stalk—nearly an inch in length, inserted in a cavity.

Skin—smooth, yellowish-green, marbled with green and brown, red next the sun. Flesh—very fine, melting, sugary, and highly perfumed. Season—November. Bore for the first time in 1843. This first-rate Pear was obtained by Major ESPEREN.

“*Jules Bivort*.—The tree is of moderate vigor, but very productive. Fruit—large, obovate, about three and a half inches in height and three inches in diameter. Skin—dull green, becoming yellow when fit for use, dotted with brown, and slightly tinged with red next the sun. Flesh—yellowish-white, fine, melting, half-buttery, with abundance of sugary, vinous, much perfumed juice. Fit for use about the middle of November. Raised by ALEXANDRE BIVORT, and bore for the first time in 1847.

“*Poire Andouille*.—The tree is vigorous, and a great and constant bearer, suitable for a standard or a pyramid. Fruit—three and a half to four inches in length, and about two inches in diameter at the widest part, near the eye; and it is nearly as thick toward the stalk, which is short, thick, and obliquely inserted. Skin—yellow. Flesh—white, coarse, juicy, sweet, and agreeably perfumed. This Pear somewhat resembles the *Beurre Bosc*, but it is smaller, and so deformed that it has received from us the name of *Poire Andouille*, that being the form which it generally assumes. Were it not rather gritty it would be an excellent dessert fruit; but it would furnish a good supply throughout the season by being dried in the oven. We have tasted the fruit fresh from the tree in the middle of September, its usual period of maturity, and at the same time fruits of the previous year, dried in the oven, and still very excellent. We received this excellent variety from the Abbe CANET, commune de Montigne, near Montfaucon (Maine-et-Loire), who had cultivated it for fifteen years. He obtained it from the nurseries of M. LANGLOIS, at La Brulais, near Beaupreau, which were soon given up. M. CANET had no name for the fruit, nor had he seen the variety in his neighborhood. [From the above description, it is very probable that the variety in question is the common *Calebasse*, not the *Calebasse Bosc* or *Beurre Bosc*, to which, however, it has externally a resemblance. The common *Calebasse* is an extraordinary bearer, and on this account it is grown in some places near London; but if it should prove the same as the *Andouille*, it appears that it would be valuable for drying.]

“*Conseiller de la Cour*.—Tree very vigorous and an abundant bearer, well adapted for a pyramid, the form which it naturally takes. Fruit—very large, obovate, usually about four inches and three-fourths in height, and twelve inches in circumference. Stalk—slender, woody, about three-fourths of an inch or from that to an inch in length. Eye—sunk and open, frequently without any remaining segments of the calyx. Skin—pale green, dotted with russet, with which it is more closely covered near the stalk. Flesh—white, fine, juicy, half-buttery, with abundance of sugary and agreeably perfumed juice. Season—end of October and November. One of VAN MOSS' seedlings [and, according to the *Annales de Pomologie*, it was named from the circumstance of his son being *Conseiller a la Cour d'Appel*, of Brussels. The tree bore for the first time about 1840.]

“*Marie Parent*.—Tree—moderately vigorous. It first produced fruit in 1851. Fruit—large, pyriform, with the surface uneven. Stalk—oblique, three-fourths of an



inch in length, woody, and of a brown color. Eye—surrounded with folds in a rather large cavity. Skin—green, changing to a golden yellow when the fruit becomes fit for use. Flesh—white, very fine, melting, somewhat buttery, very juicy, sugary, and deliciously perfumed. Ripens in October. Raised by M. BIVORT. [This sort is figured and described in the *Annales de Pomologie Belge*, Vol. I., p. 15. M. BIVORT states that it was raised by him in 1844, and that the seed was taken from fruit gathered that year at Louvain, from a tree among the varieties resulting from the last generation of seedlings raised by Professor VAN MONS, named in compliment to Madame PARENT, wife of the editor of the *Annales de Pomologie*.]

“*Bonne de la Chapelle*.—The tree is of moderate vigor, and apparently very productive. Fruit—middle-sized, roundish, or rather Bergamot-shaped, measuring two and one-third inches from base to top, and two and three-fourths inches across. Stalk—slender, and about an inch in length. Skin—light green, glossy, irregularly sprinkled with small brown dots. Flesh—white, crisp, juicy, sugary, and perfumed. Season—end of September. This sort was found by M. JACQUES JALAI, gardener at Nantes, in the wood of La Chapelle-sur-Erdre, near Nantes, in 1845.

“*Beurre de Wetteren*.—Tree—vigorous, very thorny, suitable for a pyramid. It bore for the first time in 1847. Fruit—middle-sized, turbinate. Stalk—about an inch in length, rather thick, slightly curved, with some small plaits around its insertion. Eye—sunk in a wide, evenly-formed cavity. Skin—completely covered with russet, and slightly colored next the sun. Flesh—fine, yellowish-white, half-melting, buttery, with an abundant sugary, agreeably perfumed, musky juice. [In the *Annales de Pomologie*, where this sort is figured and described, p. 59, it is stated to have been discovered by M. LOUIS BERKMANS, in his garden at Heyst-op-den-Berg, among a number of wild Pear trees, which were partly from his own sowings, and partly from those of the late Major ESPEREN, of Mechlin.]

“*Bon Gustave*.—Tree—vigorous, suitable for a pyramid. Fruit—middle-sized, three and a half inches in length, and twelve inches in circumference, of a regular pyriform shape. Stalk—nearly an inch in length, thick and woody. Eye—shallow and open. Ground color of the skin light green; but nearly the whole surface is russeted. Flesh—white, fine, buttery, with a sugary, perfumed juice. A fruit of first rate quality, ripening in December and January.

“*Poire Prince Albert*.—Tree—vigorous, and succeeds both on the Pear and Quince stock. It naturally takes the pyramidal form. Fruit—middle-sized, pyriform, three and a half inches in length and two inches and three-quarters in diameter. Stalk—about an inch in length. Eye—small, open, placed in a shallow, evenly-rounded cavity. Skin—very thick, smooth; ground color pale green, becoming yellowish when ripe, sometimes slightly colored next the sun; it is tinged with red near the stalk, elsewhere distinctly marked with reddish spots and sprinkled with black dots. Flesh—yellowish-white, fine, melting, with a rich sugary flavor. Season—February and March. This delicious fruit was obtained by M. BIVORT, from one of the trees raised from seed by Dr. VAN MONS, and which fruited for the first time in 1848.

“*Van Marum*.—Tree—vigorous, and an abundant bearer, suitable for a pyramid,

and succeeds on the Pear and Quince stocks equally well. On account of the size of the fruit, we have thought the tree worthy of trial against a wall. The size of the fruit is enormous, seven inches in length, and twelve inches in circumference, calceolate shaped. Skin—bronze colored, brighter where exposed to the sun. Stalk—very short, thick, fleshy, but sometimes it is long and slender; it is inserted in a small, narrow cavity. Eye—open, in a wide spreading hollow, surrounded with small plaits. Flesh—white, coarse, fibrous, breaking, with but little juice, sweet and perfumed. Season—October. This superb fruit was obtained by VAN MOSS, in 1820, and was named by him in compliment to the eminent Dutch chemist, VAN MARUM.

*"Desire Cornelis.*—Tree—pyramidal, vigorous, productive, thorny, its branches extending almost horizontally. Fruit—large, nearly four inches in height and three and a half in diameter. Stalk—rather more than an inch in length, somewhat oblique. Eye—open, shallow, surrounded with small projections. Skin—rough, pale green, becoming yellowish as the fruit approaches maturity, spotted with light brown, slightly tinged with red next the sun. Flesh—very fine, white, buttery, melting, with abundance of sugary, perfumed juice. Season—beginning of September. Raised by M. BIVORT.

*"Poire Deux Sœurs.*—Tree—vigorous, pyramidal, thorny, and an abundant bearer. Fruit—large, pyramidal, long and tapering to a point, four inches and three-quarters in length, and half as much in diameter, ribbed towards the eye. Stalk—upwards of an inch in length, of moderate thickness. Eye—slightly sunken. Skin—pale green, speckled with brown, interspersed with black dots. Flesh—fine, yellowish green, buttery, moderately juicy, very sugary, leaving, after tasting, a decided nut or almond flavor. Season—November. The tree was found in a garden at Mechlin, and named by Major ESPEREN, but at what period we do not know.

*"Bergamotte Esperen.*—Tree—vigorous, somewhat thorny. Fruit—middle sized, Bergamot-shaped. Stalk—nearly an inch in length, slightly curved. Eye—in a shallow depression, surrounded with small knobby wrinkles. Skin—rough, green, becoming yellowish at maturity. Flesh—white, tinged with pale rose color, very fine, melting; juice abundant, sugary, and agreeably perfumed. Season—March and April. This delicious fruit is one of the many seedlings raised by Major ESPEREN."



## Foreign Notices.

BEGONIA FUCHSIOIDES.—Among the many favorites of our plant houses, few are more deserving of attention than the Fuchsia-like Begonia. Its graceful habit, the brilliant color of the flowers, the short time required to have plants in a blooming state, render it worthy of universal cultivation. To those with whom winter flowering plants are in demand, this Begonia will be found indispensable, and when well grown and bloomed it cannot fail to be generally admired.

I aim at having the plant in flower the whole, or at least the greater part of the year; and to secure this, it is necessary to propagate at two different seasons. In the first instance, cuttings are obtained in the beginning of February, selecting young healthy pieces, such as are not over full of sap, and which are rather firm; these strike freely, inserted rather thickly around the sides of 5-inch pots, and plunged in a close warm frame where the bottom heat is about 75° or 80°. Any light sandy soil will answer. I generally use equal parts of silver-sand and leaf-mold, the latter passed through a fine sieve and thoroughly mixed with the sand. When the cuttings are well rooted, which will be the case in the course of a month, they should be potted singly in 5-inch pots, and replaced in the propagating frame, and if they can have the assistance of a gentle bottom heat all the better. When the pots become filled with roots, shift into 8-inch ones, and place the plants in a shady corner of the stove, or wherever it may be convenient, provided a temperature of from 60° to 65° is maintained, and a moist atmosphere kept up; but unless they occupy a shady situation, it will be necessary to screen them from the midday sun, as this species is rather impatient of bright sunshine; and if thus exposed, it loses that fine glossy appearance which the foliage presents when in vigorous health. When the pots become filled with roots, a little clear manure water will be beneficial; and they should be syringed with pure water, morning and evening. By the middle of June they will require a final shift into 13-inch pots, and should be encouraged to make vigorous growth. With regard to stopping, they merely require to have any over luxuriant shoot stopped, when it has attained the desired height, so as to regulate the flow of the sap, and induce the formation of lateral branches, upon which the flowers are produced. The stronger shoots should be supported by neat stakes, and tied out, so as to accommodate the side shoots which are to produce the flowers. Managed in this way they form fine bushy plants, commence blooming in October, and continue in flower till March, or even later, if kept in a temperature of 50° or 55°.

A second lot of cuttings should be got in about the middle of July, and treated as the first, except that after the second shift, which they should receive in September, they may remain in 8-inch pots till February. During the winter they should occupy a situation near the glass, where the temperature may average from 50° to 60°. Early in February a portion of the plants may be shifted into 13-inch pots, after which a slight increase of heat will be essential to their well doing; but when subjected to a high temperature at this early season, they should receive all the light that it is possible to give them. As the plants progress in growth, they must receive attention in the way of stopping and tying, and when the pots become full of roots they should be watered frequently with clear manure. The remainder of the plants, if allowed to remain in their winter pots, and encouraged with a slight increase of temperature, will flower at an earlier period than those which occupy larger pots, or they may be left in a cool place until the middle of March, and then shifted to form a succession to those shifted in February.

This Begonia may be removed to a conservatory, when in flower, where it will continue to produce a constant succession of blossoms during several months, but unless the conservatory



is treated something like an intermediate house, it will be necessary to place the plants in the warmest corner, and where they will not be exposed to currents of cold air; a situation where they can receive abundance of light, without being exposed to the direct rays of the midday sun, will be necessary, in order to have the flowers well colored. After the blooming season is over, the old specimens may be thrown away, to afford space for young plants, which bloom more freely and produce fine trusses.

The soil best suited for this *Begonia* in all its stages is equal parts turfy-loam, peat, and well decomposed cow or horse manure. The peat and loam should be carefully broken, and used in as rough a state as the size of the shift will allow; the dung should be carefully mixed with sharp sand previous to being mixed with the peat and loam; this tends to thoroughly separate any lumps, which otherwise would be sure to form a harbor for worms; the quantity of sand should be regulated according to the nature of the loam and peat, enough being added to secure perfect drainage, as this *Begonia* is somewhat impatient of stagnant moisture about its roots. *Alpha*, in *Gardeners' Chronicle*.

*DEUTZIA GRACILIS*.—Among the numerous introductions of late years, few have found more admirers than this charming *Deutzia*, and possibly none of our early flowering plants are more especially deserving of notice. It is easily cultivated, tolerably hardy, forces with the greatest facility if the wood has been properly ripened, flowers profusely even in a small state, and it may be had in bloom the whole of the early spring months. At that season the appearance of a well flowered plant, covered with numerous clusters of snowy white flowers, is sure to excite admiration; and the long duration of the blossoms render it especially adapted for the decoration of the conservatory, drawing-room, or, indeed, almost for any situation in which sufficient light and warmth is maintained.

So general a demand for this *Deutzia* has occasioned its being extensively propagated, and well-established plants may now be obtained of any nurseryman at a trifling cost. If procured at this time, the plants, if healthy and well rooted, should at once receive a tolerable shift, using a compost consisting of two-thirds turfy loam and one-third leaf soil, or other decomposed vegetable matter, adding a sufficiency of sharp sand to preserve the porosity of the soil. After potting, place them in a sheltered situation out of doors; and as they become established and commence growth, remove them by degrees to an open and airy situation, when the pots should be plunged to the rim, taking care to adopt some means of preventing worms, &c., obtaining ingress to the roots. Water as required, never allowing the plants to be checked, but encourage them to complete their growth as early in autumn as possible. If required for early forcing, I prefer removing them under cover before heavy rains or severe weather sets in; being deciduous, they occupy but little room in a corner of the greenhouse or other convenient place, where they should be watered sparingly, but sufficient quantities should be given to prevent the ball from becoming dry.

If started in time, plants may be had in flower in February; for this purpose, early in December they should be cleaned and top-dressed, pruning out or shortening any superfluous shoots, but bearing in mind that the flowers are produced most copiously on well ripened moderate growth of the present year. When the wounds have dried, remove the plants to a temperature of 50° to 55°, and place them near the light. Water when required, and occasionally on fine mornings give a gentle sprinkle with the syringe. As they advance, the flowering shoots will be readily perceived, and should be tied and regulated accordingly. When the flowers begin to expand remove the plants to a cooler situation: this will make room for a second batch, which should by that time be progressing.

After the plants have finished flowering, remove them to a warm greenhouse to complete their growth, giving them a shift if necessary preparatory to hardening them off, and placing them out of doors, when all danger of frost is over. They will bloom much earlier the second year than they did the first. If not required for early forcing the temperature of a warm greenhouse will induce them to flower early in April; after blossoming they may be treated as previously directed.

Cuttings of this plant root freely in spring; use young side shoots three or four inches long taken off with a heel attached to them. Place them in a pot filled with a light sandy compost, cover with a bell-glass, and set them in a close warm pit or frame, in which, if there is a gentle bottom heat, so much the better. When rooted, pot them singly into 3-inch pots, and place them in a close frame, and as the pots become filled with roots give a second shift, and afterwards harden them preparatory to turning them out of doors, where, with due attention, they will grow much stronger than if kept under glass. To flower strongly they should be grown a second season before they are forced, and by that time, if well treated, they should be well established plants in 8 or 9-inch pots. They will, however, flower well in pots of a much smaller size, but they should not be kept more than one year without shifting; therefore where small plants are desired it is preferable to propagate a few each season, planting out such as have become too large to be kept conveniently.—*Alpha, in Gardener's Chronicle.*

THE CINERARIA.—Flowering from Christmas to June, and forming handsome specimens for decorative purposes at a comparatively small expense, both as regards attention and accommodation, and also furnishing a profusion of finely-shaped many-colored flowers for bouquets (which the Cineraria does), it well deserves to be, as it is, one of the most popular flowers of the day. It is of easy culture, and in most cases is well managed; but, nevertheless, in some instances (where ample means exist, and also doubtless a desire to produce respectable specimens) it exhibits effects of the worst possible treatment. The following hints may enable such growers to produce creditable examples of this extremely useful plant. The ordinary method of propagating the Cineraria is by root suckers, which are produced abundantly by plants after blooming, when placed in a shady situation and properly attended to with water. The old plants should be broken up as early in August as suckers can be had strong enough; the latter should be potted singly in 4-inch pots, and placed in a shady part of a cold frame till well established, which will be in less than a fortnight. The plants should then be placed near the glass, and receive abundance of air, with a view to secure "stocky" growth. During autumn, and until severe weather occurs, a cold frame will form the most suitable situation for promoting rapid growth; but some attention will be necessary not to wet the foliage any more than can be helped, and also to avoid cold currents of air, which turn the leaves foxy, and greatly injure the plants. At the same time, however, admit sufficient air to prevent weakly growth. Water should be applied early in the day when necessary, giving a good soaking, and air admitted on the sheltered side of the frame, to dry the atmosphere and foliage. During autumn and winter, the Cineraria is somewhat liable to mildew, especially some varieties; keep, therefore, a sharp out-look for this enemy, and apply sulphur the moment it appears to the parts affected. Mildew is greatly encouraged by a confined over-moist atmosphere, which is also very congenial to aphides, which will be sure to make their appearance under such circumstances. As soon as they are perceived, apply tobacco smoke, but if the plants are kept in good health, neither evil will be very troublesome. As soon as frost is likely to occur the glass should be protected every night with straw screens, or some efficient covering; for remember the Cineraria will not stand much frost, and neglect in covering may do irreparable damage. With respect to potting, the plants should be allowed plenty of root room, until near their period of flowering, and they ought never to be pot-bound during the growing season. Liberal shifts may be given to healthy thriving plants, but weak varieties should not be over-potted. Specimens may have 10-inch pots at the second shift, which will be sufficiently large for the winter, and in March they may be moved into 12 or 15-inch pots, according to the sized specimens desired. The plants should be removed to the front of the greenhouse, or to some light airy situation, where they will be secure from frost and damp. As before stated, keep them free from insects and mildew, and remove any decaying leaves as they appear. When the flower stems begin to elongate, they should be pegged or tied out, so as to keep the specimens open for the admission of light and air, and manure water will be highly beneficial at this stage. When the plants are in flower they should occupy an airy place, where they will receive abundance of light without being exposed to the full force of the forenoon's sun; but this applies only to plants flowering



after the sun becomes powerful in spring. Those blooming in winter like full exposure to the little sunshine and light which can then be afforded them. Where specimens are wished to flower in winter, cuttings should be selected about April, planted in light sandy soil, placed in a temperature of about 55°, and grown as freely as possible during the summer and autumn, and allowed to become pot-bound towards November, when, if placed in a temperature of about 60°, they will be found to flower freely, and will be exceedingly useful for furnishing cut flowers. Seeds sown in April produce useful plants for winter flowering, as they grow more vigorously during the summer. When the beauty of the specimens is over, remove the flower stems, unless seed is wanted, and then only a few spikes need be left. Place the plants in a shady situation and keep them clear of insects and properly supplied with water until a supply of suckers is obtained, when the old plants may be thrown away. Good fresh turfy loam, in the proportion of two parts to one of two-years old cowdung, well intermixed with a quantity of clean, sharp sand, according to the nature of the loam, to insure efficient drainage, forms an excellent compost for the *Cineraria*. For small plants leaf-soil or sandy peat may be substituted for the cowdung.—*A.*, in *Gardeners' Chronicle*.

THE GENUS *CYTISUS*.—The species and varieties belonging to this genus are among the gayest and most easily cultivated of our winter and early spring flowering plants; producing, with ordinary management, an abundance of bright-colored, cheerful-looking flowers for some three months in succession; and for amateurs, having only a small collection of plants, nothing could be more useful.

Beginners should commence with young plants, of *C. racemosus* for instance, which, if procured at once, will form nice little specimens for blooming in spring; they should be placed in a cold frame, or a cool airy part of the greenhouse, giving them plenty of water at the root, syringing them overhead on the mornings and evenings of bright days, and keeping them near the glass, to induce close short-jointed growth. If the pots are found to be well filled with roots, which, in the case of healthy plants received from the nursery, will be sure to be the case, give a liberal shift, say into pots two sizes larger than those in which they have been growing. For soil use about equal parts of good rich light turfy loam, and strong fibry peat, broken up so that it would pass through a half-inch mesh sieve, and well intermixed with sharp sand, and some lumpy bits of charcoal, to keep the mass open after the decay of the fibre. Care should be observed to thoroughly drain the pots, for the plants will be found to require a very liberal supply of water; and unless perfect drainage is secured, the soil will be apt to become sour towards the bottom of the pots. Beyond the ordinary routine of watering, syringing, &c., very little attention will be necessary during the growing season; but if spider should make its appearance, no time must be lost in eradicating it, by laying the plants on a clean mat and thoroughly washing the under sides of the leaves with the syringe; this operation repeated twice a week for a fortnight, will generally be successful, unless when the plants are growing in too warm a situation, and in this case it will be nearly impossible to keep them free from this pest. If any branch is observed to be taking a decided leave of its fellows, it should be stopped, and the main shoot should be kept neatly tied to a stake; this is supposing that the object is to obtain a well furnished pyramidal bush, which is decidedly the best method of training; but if any other form is desired, it will be easily attained by timely attention; for the plants, being vigorous growers, are easily trained, with a little care, in any shape. If the plants can be kept near the glass in a light airy situation, so as to induce short compact growth, they may be kept growing till late in autumn, but they should not be kept too close at this season. They may be wintered in a cold pit or wherever they can be protected from damp, for a few degrees of frost will not injure them. After they have bloomed in spring allow them to stand in a rather cool place for a fortnight, then cut in the shoots slightly, and place them in a moist and rather close spot, to induce the buds to break freely, and when the young shoots are about an inch long, re-pot, giving a liberal shift, using the same soil, &c., as already recommended, syringing freely until the roots get hold of the fresh soil. When this is the case they may be more freely exposed to air, and as soon as the weather permits, removed to a sheltered



situation out of doors, where they will not be exposed to the midday sun. Here they will grow freely and will not be so liable to be infested with red spider as in the greenhouse.

With a little attention it is easy to have these plants in bloom at almost any time during the winter, but to effect this they ought to be started into growth sufficiently early to allow of having the young wood firm by the middle of September, after which time the plants should be freely exposed to the sun, and not over watered at the root. Treated in this way they will commence flowering immediately they are placed in a moderately warm greenhouse, and if supplied with manure water they will bloom profusely for a long time in succession. When the specimens become too large to be conveniently re-potted every season, supply them liberally with manure water while making their wood and blooming, which will preserve them in sufficient vigor for several seasons; or they may be slightly disrooted every year, re-potting them in the same sized pots, and using very rich soil.—*Alpha, in Gardeners' Chronicle.*

*SPIRÆA GRANDIFLORA*, *Hooker in Bot. Mag., t. 4795; alias AMELANCHIER RACEMOSA, Lindl. in Bot. Reg., 1847, sub. t. 38.*—A very remarkable hardy shrub, found by Mr. FORTUNE in the North of China, and sent home as an Amelanchier, which it is much like in habit, except that its flowers are as large as a Philadelphus. The leaves are thin, alternate, lanceolate, entire, and apiculate. The flowers are from two to six on a raceme, white or cream colored, with a serrated petaloid calyx, and a great fleshy green disk, in the centre of which stand five free carpels. Some of the flowers are male, and it was an examination of one of these which led to the surmise that the plant might be, what it is very like, and what Mr. FORTUNE called it, an Amelanchier.—Living specimens have enabled Sir WM. HOOKER to show that this cannot be, and he refers the plant to *Spiræa*. That the fruit, when it is produced, will show the plant to be neither the one nor the other, we cannot doubt. In the meanwhile we leave it with its latest name. It is a very handsome plant, forming, when wild, a small bush; and if it should prove hardy, which is probable, it would be a great acquisition.—*Gard. Chronicle.*

*LIBROCEDRUS DONIANA, Endlicher; alias THUYA DONIANA, Hooker.*—This, singularly beautiful and interesting plant, which is a native of the north island of New Zealand, where it attains a height of from 30 to 70 feet, has stood the winter at this place altogether unharmed. It was planted in the early part of June last year in a situation facing the south and somewhat sheltered from the northern and eastern winds. It had also the advantage of a covering of Fir boughs during the intensity of the frost in winter; that, however, had been discontinued for many weeks previous to the 24th of April, the period at which the frost proved so very destructive even to the hardiest trees of the country. The specimen I forward will show in what excellent condition this rare and Fern-like form, from a climate, too, from which little can be expected to be hardy, has withstood the severity of a spring almost unexampled in its severity. *James Duncan, Basing Park, Hants.* [This is the Kawaka of the New Zealanders, and certainly a very pretty shrub or tree.]—*Gard. Chronicle.*

*KILMARNOCK WEEPING WILLOW.*—This beautiful weeping plant having lately attracted attention, its history may not be uninteresting. There lived in a sequestered corner of Monkwood estate, near Ayr, an aged botanist, named JAMES SMITH, an enthusiastic lover of plants, and a zealous collector. From him Mr. LANG, nurseryman, Kilmarnock, purchased one plant, about 10 years ago. Afterwards Mr. LANG procured a few more plants from Mr. SMITH; and as the old gentleman died shortly after, he never had an opportunity of ascertaining where he procured the variety. It is probable, however, that he found it growing wild, as the species, *Salix caprea* or Palm Willow, is one of the most common plants in the country. Mr. LANG has since been engaged in propagating the plant, and nearly 1000 have been sold. Sir W. J. HOOKER received two plants of it in spring, 1852, and having observed, during last summer, how exceedingly ornamental it was, he gave Mr. LANG a decided opinion, stating that he thought very highly of it, and that it was much admired in the Royal Gardens at Kew. The tree flowers freely in the month of April, has broad glossy leaves, every branch is curved gracefully downward, and it is

as hardy as the most hardy plant we have, being in fact a native of the country, and not, like the *Salix Babylonica*, introduced from a foreign clime. The name of Kilmarnock Weeping Willow was bestowed upon it to distinguish it from the common Weeping Willow, the Napoleon Weeping Willow, and the American Weeping Willow; it is quite distinct from either of these varieties, having leaves two inches broad.—*Abridged from the Kilmarnock Journal.*

**MATERIALS FOR A CUTTING POT.**—Provide either broken potsherds, pebbles, or chips of stones from a mason's yard, and place them in the bottom of the pot. Over these put rough fibrous peat or turf; this will act as drainage, which is most essential; then prepare peat, loam, and silver-sand in equal parts, with the addition of a little powdered charcoal; let these be well incorporated together and passed through a fine sieve; put this compost on the top of the above mentioned drainage and press it well down. This must be in sufficient quantity to reach within  $1\frac{1}{2}$  inch of the top of the pot. Finish with pure silver-sand, and let the whole be well watered, to settle all down before the cuttings are put in. Then, having bell-glasses at hand, and the pots ready, dibble the cuttings into the sand, which will induce the emission of roots, and these will strike down into the compost, which, prepared as directed, will suit any plant.—After the cuttings are inserted let them be watered with a fine-rosed pot, to settle the sand round them. Cover with the bell-glasses, and shade until they have become rooted. Cuttings must not be put in too closely together, otherwise they will dump off. Wipe the condensed moisture from the glasses once a day, but keep them close for the first fortnight or three weeks; afterwards admit air by degrees, by placing a little wedge under the glasses. When the cuttings are rooted remove the latter altogether. Sprinkle occasionally with water from a fine-rosed watering pot. By attending to these minutiae, success will certainly be attained. A slight hot bed is the best place for cuttings.—*A Gardener, in Gardeners' Chronicle.*

**CAUTION.**—The following "Caution," which we extract from the *London Gardener's Chronicle*, shows that all the fools are not on this side the Atlantic. Victims may gather consolation from this, if they can:

"Some 40 years ago a few Frenchmen opened a shop in St. James' Street for the sale of miscellaneous plants, and amongst other "nouveau" sold a baronet a "yellow moss" Rose at five guineas a plant. Between that time and the spring of 1852 I heard nothing of a similar swindle; but in March of the year just mentioned (in Bond Street) two of these scamps sold a friend of mine a collection of new Roses "vary sheep," as they "most go away," not one of which was otherwise than the veriest rubbish,—a plant or two of common Moss and red Provins worked on dwarf stocks being the cream of the purchase. This year, in Regent Street, another "Horticulteur et Fleuriste" has recently commenced victimizing the public, an amateur of some standing having bought there last week "Mousseuse Jaune," at the low price of one guinea a plant. I need say no more to convince your readers of the manner in which their pockets will be picked should they venture into this magazine.—*C. G. Wilkinson, Western Rose Nursery, Ealing.* [We print this; but such warnings are perfectly useless. The crop of fools is inexhaustible.]





## Editor's Table.

A WORD OR TWO WITH OUR CONTEMPORARIES.—Several horticultural editors have lately taken great pains to inform the public that they are not pecuniarily interested in nurseries of trees, seed stores, or other horticultural commodities. What is the object of this? Is it to inspire confidence in their superior abilities or opportunities to discharge the duties they have undertaken? We think not, for although nurserymen may not be the most efficient and competent editors, they have certainly good opportunities for acquiring the information which it becomes necessary to impart. A man who is actually engaged in the practice of horticulture in all its branches, with the most ample stock of material at hand, should be as competent an editor, other things being equal, as a doctor or lawyer, who practices horticulture only with the *pen*. Where, we would candidly ask, are we to look for horticultural editors, if not among the ranks of those who are devoted to its study and practice? Will those who proudly disclaim any connection with the trade pretend that it disqualifies a man for the editorial chair?

But they may say "if it does not render a man incapable, it prevents him from being honest, or at least, impartial and reliable." Is this so? Is the cultivation and sale of trees and plants, or seeds, such a demoralizing pursuit that a man cannot engage in it and remain honest and impartial. If these disinterested gentlemen believe so, they are bound in duty to persuade men to abandon such unholy pursuits. They should wage an open war against such a corrupting traffic. Will they do this? If so, let it be done openly and manfully, and not by insinuation. For our own part, we must take the liberty of saying that the insinuations conveyed in these announcements are both unjust and uncalled for. That there are dishonest men in all professions we frankly admit; but this does not render the professions corrupt or demoralizing, nor make it impossible for an honest man to practice them in an honest way. An honest, honorable man, will be so in all situations, and so will a mean and dishonest one. The selfish, dishonest nurseryman, if an editor, puffs his own goods, and exaggerates their merits, while the dishonest editor who is not a nurseryman, will puff other people's goods for a consideration. Where is the difference? There is no safety for the public in a man's occupation, nor elsewhere save in his integrity and good judgment; and we apprehend a discerning public will ask of an editor of a horticultural journal—"Is he honest; is he competent?" and not, "Is he a nurseryman, or a doctor?"

Suppose these honest gentlemen, by accident, or otherwise, become interested in some nursery stock; and suppose they should even go so far as to advertise a few Pear trees or Strawberry plants for sale, would they have us write them down as knaves—as no longer worthy of confidence? Would they have us believe that they hold their integrity by such a slender tenure? We hope not. We confess that when we hear a person talk about his particular disinterestedness, and lament over the fraudulence of the times, our confidence in him is not increased. It reminds us of the Pharisee of old. To decry others, and boast our own virtue, is not the way, even in these days, to win respect and confidence; and we are surprised not a little that some whom we have regarded as high-minded and honorable



men, whose talents, taste and learning should *command* patronage, beg it on such paltry grounds. For our part we would scorn such appeals for support. We do all we can to give our patrons value for their money, and we trust when we fail to do this, or when they discover that we are partial or dishonest, or any way unworthy of confidence, they will drop us at once.

THE DROUTH.—The drouth mentioned in our last number has continued up to the present time, (August 24th.) accompanied by excessive heat, except at intervals. Its effects on all kinds of vegetation may be well imagined. The pastures are completely dried up, and the Corn and Potato crops over a large portion of country, are ruined beyond a hope of recovery. Gardens and lawns have suffered severely, and the fruit crop is seriously affected. Autumn and winter fruits are shrinking and shrivelling on the trees, or dropping off, and the foliage has more the aspect of October than of August. This drouth is not local, but very general—extending, with occasional exceptions, from Maine to Missouri. We have before us a multitude of letters, giving a most lamentable account of the state of vegetation—the loss of newly planted trees—Strawberry beds dried up and ruined—the grass burned out of lawns so as to appear beyond recovery. We hope, however, refreshing rains will soon come, and produce a magical resuscitation. Floods may be expected, and timely preparation should be made to receive them. Gutters, drains, cisterns, &c., should all be in perfect order, to avoid damage to houses, grounds, and crops.

FRUIT FROM PENNSYLVANIA.—We are indebted to our friend Dr. ESHLEMAN, of Downington, Pa., for a box of fruits, among which are specimens of the *Shenk* or *Hosenschenck* Pear—one from Lancaster county, which though rather over ripe, was melting and fine; other specimens from Chester county were miserable deformed things, not worth picking up. The Doctor says his trees in Chester county which produced these knotty specimens were propagated from the tree in Lancaster county which produced the fine specimens sent. This corroborates what Dr. G. has before stated, that it is very good in Lancaster county and worthless with him. We do not pretend to say, however, that the difference is altogether owing to locality. Some two or three years ago we received scions of a Pear marked "*Eshleman*," from Dr. BRINCKLE, which are now bearing, and the fruit much resembles the *Schenck*, but it is very knotty and deformed, and not yet ripe.

Dr. ESHLEMAN also sends us specimens of the *Steinmitz Catherine* and *Heves* Pears, neither of which are yet fit to be tasted. Also, the *Brennan* Apple, a handsome looking fruit, but too ripe to be tasted; and a small specimen of *Beurre Clairgeau* Pear—decayed. The season at Downington, we think, must be two or three weeks earlier than at Rochester.

WASHING AND SCRAPING TREES.—The author of the famous resolutions on "*Washing and Scraping Trees*," which we found in the newspapers credited to the Massachusetts Horticultural Society, and copied into our last number, with some comments, has turned up in the person of "R. MORRIS COPELAND," who replies to our remarks, which he terms "*carping criticisms*," in a very unpleasant mood, in the *Practical Farmer*. All we have to say with reference to this matter is, that the Mass. Society had nothing more to do with these resolutions than to vote them a place *on the table*. We say this much in behalf of the Society. As to what Mr. COPELAND has pleased to say of our criticism, we are quite indifferent, and so are the public. When he substantiates the soundness and consistency of his recommendations, by solid, sensible arguments, we will give him the benefit of our pages in making them known.

**CURCULIO—PLUMS.**—We have several letters inquiring if any thing has yet been heard from Mr. MATHEWS' remedy. In reply we have to say, that we have not yet learned how or when the results of the experiments are to be made known. We may remark that the crop of Plums in this region is unusually abundant and fine. Our own trees are loaded down, and indeed, they have been for some years past. The only remedy we practice, and we deem it a very effectual one, is to shake the trees once a day during the period when the curculio is most active, and afterwards during the entire season shake off and pick up carefully all unsound fruit. This involves very little labor, and if pursued regularly can scarcely fail to secure a crop. We hope the new remedy may be still more efficient.

While speaking of Plums, we may as well observe that a few days since we received a call from our esteemed friend, J. J. THOMAS, a look at whose honest cheerful countenance is enough to cure the worst case of "blues." After friend T. left, we found upon our table the following interesting item, written in his well known "hand":

*Remedy for the Black Knot.*—I have never found anything that will compare in efficacy for preventing black excrescences on the plum tree to a strong solution of *chloride of lime*, applied to the wounds made by their removal. I have tried this remedy two years, and in no instance has it failed to prevent the fungus wood from bursting out again from the wound. A trial was made this year on about fifty young trees, from a portion of which the knots were cut off early in summer, and no application made to the wound; to a second portion strong lime was applied; and to a third, chloride of lime. In numerous instances the excrescence burst out again in the two first cases, in the latter none. Salt has been strongly recommended, but the superiority of the chloride was very decided.

**THE SEASON IN ENGLAND.**—Mr. RIVERS, in a recent letter, (August 2d,) writes, "The season has been, until the last ten days, the most wretched and miserable I ever knew—no fruit at all. The young nursery trees all over England are smothered with aphides. Thousands of young Peach and Apricot trees were killed by frost on the 25th of April, and those that escaped have not made any growth until recently. The young Cherry trees are all killed by the black aphid; young Plum trees much injured by the blue aphid; and the Peach trees with the brown. In fact we have had them of all colors—blue, black, white and gray; and if you are inclined to form a collection, I will send you a lot of each, duly labeled and well packed."

We are much obliged to our friend for his kind offer, but would decline in the most delicate manner possible, and assure him that our collection is already sufficiently complete.

**A FINE COUNTRY SEAT.**—The *American Agriculturist* has given, in two successive numbers, a very full and interesting description of the country seat of MORRIS KETCHUM, Esq., in the town of Westport, Conn., within a few miles of the Sound. It is called *Hokanum*, and embraces about 400 acres of land, all in a fine state of cultivation. The gardens, lawns, vinery, and all the appurtenances of a complete country residence, are spoken of as being in the finest condition.

**A NEW OPERATION.**—Mr. HOVEY says that DOWNING considered that "*Mulching tan with Strawberries*"! was the *sine qua non* of the culture of this fruit, and did not fail to recommend it on all occasions. Mr. HOVEY has evidently overtasked his mental faculties on this Strawberry business, and worked himself into a very precarious condition.

The fruit from which our frontispiece was drawn, was raised by JONATHAN WOOD, of Irondequoit, in this county.



ARCHITECTURE, &c.—We took up the other day a handsome volume with the following title: “The American Cottage Builder; a series of designs, plans and specifications, from \$200 to \$20,000, for Homes for the People. By JOHN BULLOCK. New York: STRINGER & TOWNSEND, 1854.” The work is embellished and handsomely printed, but from internal evidence is a rehash of an English publication. We first turned to the chapter on Landscape Gardening, and found it to contain directions how to treat chalk pits and cliffs, &c. Now as no chalk has been found in America, would it not have been as well for the editor or publishers to tell us at once that it was the production of one or more Englishmen, and not by silence, and the insertion of a copy-right page, have led us to believe it was from an American pen? Many of the suggestions are good, but when we saw planters advised to make their principal effects with Portugal and English laurels, which are not hardy here, we laid the volume away. It has no claim to its title of “American.”

ENGLISH POMOLOGICAL SOCIETY.—A Pomological Society is about to be established in England to promote the culture and classification of hardy fruits. Sir JOSEPH PAXTON has consented to become President. Since the Presidency of KNIGHT, the London Horticultural Society has given most of its attention to other departments of culture.

GARDENS AROUND BOSTON.—The editor of the *Practical Farmer*, WM. S. KING, accompanied the Massachusetts Horticultural Society's Committee on Gardens, in their official visits, and has made some free and easy notes and comments on what he saw. We copy the following account of the garden of Mr. AUSTIN—Black Wart, Pear Trees, &c.

“THE GARDEN OF WM. R. AUSTIN, DORCHESTER.—Mr. AUSTIN, though admiring, and to a considerable extent cultivating, flowers and ornamental shrubs, has devoted himself, especially, to the growing of fruit, the Pear in particular; in the cultivation and treatment of which he has been singularly successful.

“The grounds contain two acres, one-half acre of which is occupied by buildings, ornamental trees, hedges, &c., &c.,—leaving one acre and a half for fruit trees—in number about 600. Of these, some 500 are dwarf Pear trees, about two dozen standards, as many, each, of Cherry and Peach, eight Apple trees, and six Plum trees—which last Mr. AUSTIN is about to attempt to cure of the black-wart, by heading down two or three inches above the surface of the ground, and digging out every trace of root. This he considers a *radical* cure for the black-wart. From our experience of this pest, we doubt if he gets rid of it so easily,—it may break out again, on the pump-handle, or the cord wood in the cellar—there is no knowing where! We once headed down a Plum tree (not quite so low down as AUSTIN proposes to do), and forth came a vigorous young growth, that, the first season, made a fine new head for the decapitated tree; but, bless your sympathizing souls! every branch, and limb, and twig,—fresh and green as they were,—were coated with excrescences, as is the bottom of an old ship with barnacles;—some small and round, like peas—some extending along a limb for several inches, and completely enveloping it—some smooth and swelling, like a young boil—others cracking open, like an over-ripe nutmeg melon;—the whole head looking as if it had the goitre, the kings-evil, the mumps, and the hydrocephalus, besides being badly effected with boils, carbuncles, pimples, and erysipelas, diversified by a profuse scattering of warts and wens. This experience convinced us that there was no worm in the case, unless it be a ‘worm in the tail’ of the tree.

“But it is with Mr. AUSTIN's Pear trees that we have now to do. The Pear plantations (500 trees) contain forty-five varieties of Pears, and of these fully one-half—about 300—are of the nine sorts following:—*Louise Bonne de Jersey*, *Duchesse d'Angoulême*, *Beurre Diel*, *Urbaniste*, *Bartlett*, *Vicar of Winkfield*, *Glout Morceau*, *Passe Colmar*, and *Easter Beurre*. A few of these trees



were set out in 1845, and others in each subsequent year, until 1849, when about 300 were planted and the garden fully stocked. The manures used were solely barn-yard manures, some seven cords being applied to the two acres—a very moderate dose. One man only was employed upon the garden, and he had also charge of two horses, cow, pigs, carriages and the *chores*—enough to busy one pair of hands, with the errand department of the household—sufficient, usually, to monopolize one set of Irish legs. But mark the proceeds of the garden:

Cr. by nett sales of fruit, as per sales book (three-quarters of which is for pears),.....	\$331 72
Dr. To—say $\frac{1}{2}$ —man's wages,.....	\$100 00
To four cords manure purchased,.....	24 00
To three cords manure made,.....	18 00
	142 00
Showing a nett gain on $1\frac{1}{2}$ acres of,.....	\$689 72

“Mr. AUSTIN, as may be seen, does not manure highly; his land is good, to be sure, but his success with the Pear he attributes mainly, if not solely, to his system of pruning—watchful—constant—preserving the *wine glass* form, instead of the *pyramid*. His trees are, indeed, a marvel of human patience and horticultural skill. Here are sixteen *Duchesses*, ‘all in a row,’ and all as like to one another—in height, breadth and shape—as twin peas in a pod; and there stand sixteen *Vicars*, erect and uniform as Life-Guardsmen. Every tree of each variety extends its limbs at AUSTIN’s direction, like a well-trained poodle,—only the tree ‘stays put,’ while Pug soon ‘puts out.’”

PROPAGATION AND WINTER FORCING OF ROSES.—At a Conversational Meeting of the New York Horticultural Society, as reported by the *American Agriculturist*, A BRIDGEMAN read the following remarks on Roses:

“My practice does not, I presume, differ much from that pursued by other growers. For compost, I prefer a proportion of two bushels of vegetable mold or rotted leaves, two bushels of chopped sod, passed through a coarse sieve wide enough to allow moderate sized lumps to pass through; one bushel hotbed manure, and one of sand. The sod I use is clayey. In propagating by cuttings I find that wood of one month old will strike in many cases very readily; and when put in during the latter part of February, will be rooted in March. I use cutting-pans, about three inches deep, and a compost of two-thirds sand to one of loam, and apply bottom heat. I have a bed heated by a flue passing through it, which I find very useful for this purpose. When well rooted, I pot them off into small-sized pots, and plant them out in May. In the fall I re-pot them in the compost already mentioned, and keep them in a cool house, without fire-heat, till January; unless the frost is too great, when I protect them slightly, but use no fire-heat, till last of January or February. These plants flower well. The Tea, Bourbon, and China are treated in this way; the Hybrid Pereptuals, or Moss Roses, are not included, as neither these nor the Noisettes are adapted for winter flowering. I do not prune very closely in the fall, but in May prune thoroughly, and sink the pots in the soil, and lift them in September for winter flowering, repotting them if necessary, and pruning out all dead wood. At this season, care must be taken not to break the ball much. The temperature should be kept moderate. A dry atmosphere is very injurious and is the chief cause of failure in keeping plants in rooms. The water should always be applied at the top; where saucers are used it is only for cleanliness. Planting out secures strong plants, but is not admissible for winter blooming. I have found Hybrid Perpetuals to succeed best on their own roots. Teas and Bourbons will do well from layers. In England and the north of France, budding is generally practiced and succeeds well, but here it is quite different. I have known many failures in budding, and in some cases not more than twenty-five out of a thousand have succeeded; two out of a dozen is often the proportion in our climate.\* Budded plants are liable to produce suckers, which have been sometimes mistaken for

\* This is greatly at variance with our experience. They may be seen budded in the nurseries here as successfully as Peach or Apple trees, by the thousand: and many varieties bloom more freely, and produce larger flowers, when budded, than on their own roots.—Ed.

young, vigorous shoots. Tea Roses require lighter soil, and flower more freely than Bengal or Barbours, they will also bear more heat, and should be placed in the warmest part of the house. Roses for forcing should have as much sun and air as possible, with a moist atmosphere. I have found Roses in greenhouses, planted in the border, with bottom heat, produce more flowers with 50° of heat than in other cases with 70°, and have had better flowers when the temperature did not exceed 50°, than at 65°; 55° is a good temperature for forcing. In reply to the question, 'Is manure-water good?' I say, yes; if applied judiciously in small portions in March."

HAVING, in common with many others of your readers, suffered by being duped by dishonest nurserymen, (for there are quacks in every profession,) I would humbly suggest, as a partial remedy, that more attention be paid by horticulturists to describing trees as well as plants. Fruits are pretty well described, but one has often to wait for years to see the fruit, and often only doomed to disappointment then. The best hints that I have yet seen about trees is in J. J. THOMAS' *Fruit Culturist*, which are very good as far as they go, but more is needed. I hope, therefore, that when you, or any of your correspondents, describe fruit, that you will describe the tree also. H. W. TERRY's description of *Bourre Van Mons* Pear, in your April number, is good. I have no doubt but it would please many of your readers, as well as the writer, if you would describe a few of the best Pear trees in each number, say a page in each. Although to common observers Pear trees appear very similar, yet when minutely examined they are very different:—1st, in form or growth of tree; 2d, in color of shoots; 3d, in buds; and 4th, in leaves. I need not mention the many distinctions which each gives, for you know them much better than I do. A LOVER OF GOOD FRUIT.

In connection with the description of fruits, it is important in all cases to note the characteristic habits of the trees, in growth, wood, foliage, &c. We quite agree with our correspondent in this. We shall soon commence a series of notices of the best fruits.

ABOUT STRAWBERRIES.—SAML. J. GUSTIN, Esq., of the Newark Nurseries, writes as follows:

"I had some Strawberries this summer, of the *British Queen* variety, which for beauty, large size, and fine flavor, excelled anything I have ever seen in the shape of Strawberries. By the annexed slip from the *Herald*, you will see that they were of enormous size, [8] inches in circumference.] Mr. THORBURN and a gentleman from Boston who saw them wished me to send a box to the Mass. Hort. Society; but the largest of them got too ripe before the time. Mr. LONGWORTH, who you know is rather prejudiced in favor of the Cincinnati Strawberries, saw them after the vines had been picked twice, yet he was so much pleased with it that he took all the runners and all the fruit he could get, to raise seedlings from. The plants have only had ordinary care. Before planting, the ground was well manured, but not trenched. In the fall the ground between the plants was covered about half an inch or so with old tan bark."

Why is it we so seldom see that beautiful shrub, *Clethra alnifolia*, in gardens and shrubbery? and it is scarce even with nurserymen. Can it be because it is a native plant? Please call the attention of your readers to it. The beautiful spikes of delicate white and fragrant flowers during the month of August, make it a very desirable shrub, and it should be in every collection, however small. CHAS. DOWNING.

We are much obliged to Mr. DOWNING for calling attention to this beautiful but neglected shrub. While other shrubs of much less merit are propagated and sold by the thousand, this is seldom seen or heard of. Will the nurserymen take it up? Many years ago it was plenty in PRINCE'S nurseries.



THE MASSACHUSETTS HORTICULTURAL SOCIETY.—In your August number of the *Horticulturist* you pass some strictures upon the Massachusetts Horticultural Society, which appearances do most certainly justify. It is proper, however, to state that the committee upon the subject of "scraping and washing trees" was appointed upon the suggestion of its chairman; that he was by courtesy allowed to print his report; that it had been laid upon the table by the society, and will itself require a very essential amount of "scraping and washing" before it will be adopted.

In regard to the report of the committee upon the award of prizes to Messrs. Hovey & Co., for the *Boston Pear* and *Seedling Cherry*, it is also proper to say, that it is regarded by disinterested men as entirely growing out of bitter personal hostility and self-interest. It is affirmed in a written protest by members of the fruit committee, who are the only proper judges, that after a trial of these fruits for five successive years, they fully merit the awards given them. They also deny the statements in the report. It is untrue that the resolutions were "discussed for more than two hours." There was no discussion about it. In the absence of most of the fruit committee, and the friends of justice, Mr. Hovey begged, for perhaps two hours, that he might have a week's time to bring forward facts and defend himself and the fruit committee. If the malicious act by which he was crushed down, and subsequent debate cut off by a motion to reconsider, can be called "an interesting argument," we fear for the logic and the heart of the reporter.

A committee, composed of gentlemen of high standing, has recently been appointed to reconsider the whole subject, and no doubt it will be found that the public have not been imposed upon, either by the society or its fruit committee. Public exposure of private quarrels is worse than useless; yet, one side having been given, it is but just to state that the conclusions are denied, and that the subject is by no means settled. ONE OF THE FRUIT COMMITTEE, *Boston, Mass.*

The remark which our correspondent refers to as a stricture upon the Massachusetts Horticultural Society, was based upon the published report of a committee, which we supposed to be authentic, as it was published in the proceedings of the Society, and signed by Messrs. WM. S. KING and SAM'L WALKER. We publish this letter from "One of the Fruit Committee" with pleasure, because we know him to be a man of integrity and honor, and because we are anxious to put a better face upon the matter on behalf of the Society and its most important committee. Whatever may be the real origin of this unfortunate affair, it is greatly to be regretted; but we hope to see it thoroughly cleared up. It would be a great pity if personal hostilities should be permitted to bring such a noble institution, the only one in the country possessed of ample means for doing good, into disgrace before the world, by an impeachment of the integrity of its most prominent members and committees. We regret to see it stated that the contributions to the very useful weekly exhibitions have fallen off greatly on account, as it is assumed, of this misunderstanding.

I HAVE been much surprised, and I must say disappointed, on reading several articles or notices in the August number of the *Horticulturist*, on the subject of the award by the Massachusetts Horticultural Society, to the *Boston Pear*, and *Hovey's Seedling Cherry*. A long time (nearly a year) has now elapsed since the award of the Committee was made public, and the superiority of these fruits established, so far as the action of one of our oldest and best esteemed Societies could give them character. Closely following this report comes Hovey & Co.'s advertisements, and I from "Maine to Georgia," those who know but what they read are urged and induced to buy "the new fruits which Hovey & Co. have the pleasure of offering to amateur cultivators and the trade generally." Of course, coming with such vouchers, what could we poor people do, but buy? And now, when the stock has become stale, and unsaleable at extravagant prices, comes the report of another Committee, to inform us that Mr. Hovey obtained his



award by irregular and improper means. Now I should like to know how and when the discovery was made; and if gentlemen of the Society at their last meeting in 1853 knew a fraud had been perpetrated, why action was not had at once? I must confess it seems to me the Society "is great in cowardice as in knaves," and should not murmur if in future it shall be regarded as a branch of Hovey & Co. Is there any way by which we can know if our *Boston Peas* and *Hovey's Cherries* are of any value? The Committee say nothing on the subject, and many of the amateur cultivators would like to know if the ground bestowed upon them is thrown away.

One word as to the disappointment. I think the subject one which calls for the utter rebuke of all honest horticultural journals, and I was disappointed at the very Homeopathic notice you took of it. Here is a case in which it appears on record that one of our oldest and best horticultural societies has been controlled by, and made the tool of, a nurseryman, for self-purposes—making a strong case to prove the assertion true, that horticultural societies are designed as advertisements for nurserymen. As we both know this is not the intention of a majority of those who aim to establish such societies, the necessity for stern rebuke in all such cases becomes the more obvious.

Would it not be well to inquire if the *Concord Grape* is without stain in its parentage, as the company in which it makes its advent has proved so disreputable? and would not it be well to suggest the appointment of another committee to inquire? ONE OF THE AMATEUR CULTIVATORS.

In relation to this matter we have a letter from a highly respectable member of the Society, one who is familiar with the doings of the Fruit Committee, taking the ground that this is more a personal quarrel than anything else. This may in a great measure be the case, and we therefore think that judgment should not be too rashly pronounced against either the Fruit Committee or Messrs. Hovey & Co. The truth will have to be told. It is no longer a matter in which the Society is interested—the public at large have become parties.

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SWEET POTATOES.—I notice, in the June number of the *Horticulturist*, an article from the pen of C. E. GOODRICH, upon the culture of Sweet Potatoes. In that article I notice one error, which ought not to pass without correction. He says: "Dig as soon as the vines are killed by the frost." On the other hand, our most experienced and successful cultivators say that the slightest frost must be carefully guarded against, especially if seed be an object, as the *frosting of the vine increases the liability of the tubers to rot*. I have no doubt the "dry rot," of which Mr. G. complains, is the result of the *frosting* which he permits. If it is not convenient to remove the tubers from the ground previous to early frost, their separation from the vines may be effected by passing a sharp knife between them, just above the surface of the ground. W. J. TOWNSEND, Zanesville, Ohio.

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CRITICISM.—The remark contained in your last issue respecting the necessity of truthful, candid, and open expression of opinion, in criticising horticultural works, deserves more than a passing attention. It should be repeated, re-printed, and re-read by every editor, gratuitous reviewer, or paid contributor. But more, it should be acted upon. Black mail has had its day. The basket of luscious fruit furnished for Dr. so-and-so's table, is but a sorry recompense for a fulsome puff, wherein some new variety of Pear, or Apple, or Cherry, or Blackberry, or Strawberry, or Raspberry, or any other changeable fruit, is inflicted with malice *prepense* on the too credulous reader. Books are the guides of future generations. Great men may live and die; able cultivators and eminent pomologists, who have never contributed a line to horticultural literature, they pass away. The contemporary author who truly and perspicaciously writes the record of the operations of such men, does more for the good of future generations than most

persons will give him credit for. The reviewer, who sits down with prepossessed knowledge and experience, and a just and upright principle, as well as a high sense of honor, to remove the bad and train the rambling ideas of the writer, performs no mean service. Delicacy, collateral relations, sympathy for laborious toil just performed, the laborer still remaining unremunerated, —all these charitable and reasonable considerations, constrain the Jeffries of horticulture, unless hopelessly blind to bribes, and blandishments, and threats. But they must not. The cultivators must not be deluded by horticultural periodicals or societies. Books must be purged and worthless fruits condemned, at all hazards. We hold you, sir, the Editor of the leading horticultural journal, accountable to the community; let not fear or favor bend you from your course. Let all fruit books be fairly reviewed, if at all; all fruits fairly tested, if at all; societies exposed who endorse without satisfactory evidence; all members who attempt or succeed in fraud on societies, cashiered; and then we shall have a pure horticultural literature, and an orchard of truly described fruit. You know the permanent benefits that would thus be secured to horticulture. *S., Philadelphia, Pa.*

THE NELUMBium SPECIOSUM.—Last year you published a small sketch from my pen of the successful treatment of this plant in the open air at Springbrook, and I think I implied a promise to report on the result of its trial out during the winter. In a recent visit, I was pleased to find that it had stood out perfectly well, and had covered the whole of the basin with its beautiful foliage, among which several flower spikes were strongly pushing their way. I look upon this as one of the most interesting plants Mr. Core's liberal patronage of horticulture has been the means of showing us in perfection; for even the *Victoria regia*, so gorgeous and unapproachable in itself, from the great expense required to its perfect production, must forever remain a luxury to be enjoyed but by a few. But in this we have a plant superior to anything generally seen in this climate, beautiful and long famed as one of India's choicest treasures, adapting itself to our wants and wishes as perfectly as our own white Water Lily. As the plant last year was but raised in the spring, it did not flower till September, and so had no time to perfect its seeds; being now two months earlier, the probabilities are that there will be an abundance this season. In the same basin Mr. Core has also growing another kind of *Nelumbium*, brought from Minorea and presented to him by a lady of Natchez. I observed, on sowing the seed last winter, that they were nearly round; and as the leaves now have a much greener hue than the *speciosum*, the probability is that another valuable addition has been made to this admirable collection. The *Nelumbium luteum* has also been domiciled with these others, so that some interesting hybrids may be looked for. THOS. MEEHAN, *Philadelphia.*

TOO HAPPY AT HOME.—*To Elsie*—The interest you have taken in my case, which you persist in thinking unfortunate, has laid me under great obligations. The inquirer after happiness often meets with unexpected rebuffs; his schemes result in unlooked-for disappointments and vexation. That you, who appear from your own account so eminently calculated to be happy, and to make all around you cheerful and comfortable, with talents that I ought to envy, should be discontented with your lot, and desire a change, is a great surprise, and I must, before I finally consent to risk the even tranquility of your and "husband's" course of life, enlivened as it is by the great alleviator of our lives, *hope*, which to me is alas! lost, point out where you, as well as myself, may expect to be disappointed. You do possess, I have not the least doubt, all those qualifications you claim, and I cannot but congratulate the man who has gained so great a prize. Would it not be rather cruel to take you from the wild flowers and shut you up in heated rooms and to the cultivation of hothouse exotics? and I may as well state at once that I have no taste for the native productions of your prairies, preferring the sight of pine-apples under glass, and the other products of tropical climes. This you will say is an error of taste; but it is innate



and fostered by a long course of habitual indulgence, in which I have described myself as only "too happy," while you, with more natural pursuits, seem to be desirous of trying for something *unexpressed*! Was my first complaint which so affected your sympathies anything but a description of enjoyment? Because I so much delighted in my garden and flowers, and fruits, and preferred their society to the intrusion of inquisitive and often ignorant idlers, was I describing a form of discontent which materially differed from yours? I had taken the virus from *Dowsing* and others, who had taught me that I was to embellish home to make it the most delightful place on earth to me and mine; had succeeded, and *only* found that there was something still wanting to make a paradise. Is my experience different from that of the whole human race, who discovered long since that earth cannot afford perfect felicity? Would you banish me from what has cost me mentally and bodily so much to accomplish?—take me from the possession of objects of art acquired by toilsome travel to the seats of science and the collected treasures of centuries? You would, I believe, from your earnestness, do this. Let us remember before we barter, how many have failed in changing; how happiness flies like a shadow; how important is example. Would it, think you, conduce to the pleasure and contentment of those very lovely children to go back to the west after the indulgencies you promise them? Would you, for example, educate them for two years in all the luxuries, and then expect them to give them up? During your sojourn among my collected comforts your fortune will not improve, and I presume, perfect as you have made these scions of yours, they are human. I would not have you suppose I do not think them very uncommon specimens indeed, nor do I think they would gape at my pictures or "bijouterie" more than any well regulated children or grandchildren of my own; (I am *not* an *ascetic* bachelor, I assure you,) but alas! in erecting my habitation and surroundings, I actually forgot there were such troublesome creatures as children at all, and I must, if we come to terms, ask liberty to turn a key on a few rooms furnished only for grown people. There are, too, a few of the floors covered with materials to which I should rather prefer that no person who greased my harness! should have constant access. I will not here provoke you by hinting that books of prints and water-color drawings should be handled with cleanish fingers. You might certainly wash them, but grease is a sticky substance, and sometimes gets under the nail's! We must make some arrangement by which the stable duty you impose on yourself may be dispensed with. I assure you there will be little time found for such occupations, if you perform all that will fall to your lot. Why, "Mrs. ATTICUS" has never found time to do more than hint a gentle complaint that the seats of the family carriage are not entirely free from dust! I shall not point out *her* duties, but none of them, I am sure, your neat habits will allow you to intermit. You certainly would not be less nice, and as you will have full occupation in-doors, this forms another argument why I think we had better shut up a few of the rooms, and perhaps the picture gallery, in my "proposed" absence.

I had written thus far when I found *both* my feet were beginning to swell with the gout; I am now in extreme agony, and if your husband will really relieve me, and that very shortly, from it (it would be better to let him see the state of my biggest toe! before he consents), I shall be yours, ATTICUS.

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#### Notices of Books, Pamphlets, &c.

INAUGURAL ADDRESS, delivered at Farmer's College Commencement Day, June 7, 1854, by ISAAC I. ALLEN, A. M., President, and Professor of Mental and Moral Science, and of the Institute of Civil Law.

An Agricultural or Farmer's College has long been talked of in our own State, and before the death of Mr. DELAFIELD, some steps were actually taken toward founding one, but we hear nothing of it now, and we fear it has once more fallen to the ground. It is not so in Ohio. The Farmer's College in Hamilton Co. is firmly established. We have its



Catalogue of Students before us, numbering nearly 300. It was incorporated and organized in 1846—previously it was known as the *Pleasant Hill Academy*, under the direction of F. G. CAREY, who has been during the whole time the main-stay of the institution.

The farmers of Ohio have taken up the matter like men who understand their interests. By their liberal subscriptions to the stock, by their donations and endowments, they have placed the institution on a firm basis. An experimental farm of 75 or 100 acres is about being added. This we think was indispensable, and we hope here to see practical as well as theoretical lessons given in Agriculture, Horticulture, Arboriculture, &c.

A Convention of the friends of Industrial University Education is called to meet at the College on the 13th, 14th, and 15th of September next, for the purpose of embodying public sentiment in regard to a plan of operations. The farm will be dedicated at that time, and the proceedings will be of great interest. We regret our inability to be present, in consequence of other engagements, but we shall not lose sight of the Farmer's College.

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THE AMERICAN TEXT-BOOK OF PRACTICAL AND SCIENTIFIC AGRICULTURE, intended for the use of Schools, Colleges, and Private Students, as well as for the Practical Farmer. By CHAS. FOX, Senior Editor of the "Farmer's Companion and Horticultural Gazette," of Detroit. ELWOOD & Co., Detroit.

Since the receipt of this book we have been pained to learn of the death of its author, Mr. FOX, a man of talent and great usefulness. He occupied a prominent position among the teachers of Rural Science, at once the editor of a popular Journal, and professor of Agriculture in the University of Michigan. This volume will keep his memory fresh among agricultural students. We have barely had time to glance over the arrangement, but it strikes us favorably, and it is well spoken of by the Agricultural Journals. We are sensible of the want of such a work at this time, when, fortunately, people begin to look with favor upon including a knowledge of Rural Science with other branches of education. We cordially recommend this book, with *Norton's Elements*, and *Thomas' Farm Implementations*, as worthy a place in every farm library, and in every country District School Library in the Union.

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PAMPHLETS RECEIVED.—Circular from Western Virginia Agricultural Society and Industrial Institute, calling attention to the Autumn Exhibition at Wheeling, September 13th, 14th and 15th. We are glad to see energy displayed in that quarter. There seems to be a general waking up.

*Brooklyn Horticultural Society's* List of Prizes, to be awarded at their Fall Exhibition, which will be held at the Brooklyn Athenæum, September, 19, 20 and 21.

*Susquehanna and Chemung Valley Horticultural Society's* List of Prizes to be awarded at Fall Exhibition, to be held at Ely's Hall, Elmira, on the 15th of September, during the day and evening. This new and prosperous Society offers a liberal list of premiums.

List of Premiums of the *Beaver County Agricultural Society*, (Penn.) Fair to be held Thursday and Friday, September 21 and 22. Plowing Match on Thursday. Address on Friday. The Report of the Board of Managers says: "We have a Society with over five hundred enrolled members, entering its second year with valuable improvements, clear of all debt or incumbrance, with a cash surplus of over \$200 for further and extended usefulness, which speaks well for the public spirit of citizens generally, especially those engaged in agricultural and industrial pursuits." We note this as an indication of the prospects of Agriculture in Beaver County.

*Premium List of the Kentucky Horticultural Society.* Annual exhibition to be held at

Louisville on the 19th and 20th September. All contributors from a distance are requested to send their articles to the care of the Treasurer, A. G. MUNN, who will have them arranged for exhibition. All articles for exhibition must be delivered at the exhibition room by 9 o'clock A. M. on Tuesday, Sept. 19.

### Answers to Correspondents.

(P., Elkhorn, Wis.) INSECTS.—The "nits" which you speak of on the bark of your Apple trees, are *scaly aphides*, or bark-lice. You can destroy them with a wash made of soft soap and water—two quarts of the former to eight of the latter, with lime enough added to make it as thick as whitewash. Give the affected parts a good coat of this with a brush.

The caterpillar on the leaves is quite a different insect, and can be destroyed most easily in the morning, before they spread over the tree. Hand-gathering is the most efficient.

HOW TO STOCK A GREENHOUSE.—I built, last year, a small greenhouse, with a view of having cut-flowers regularly for the center table. I had previously known little of the cultivation, and no more than a transient frequenter knows of the contents and mode of treatment necessary to produce the required result. My gardener, who had previously conducted a little commercial greenhouse, was my adviser. We bought a hundred young Camellias, and some other plants, sowed seeds, potted Roses, got cuttings from friends, made a fire, and waited for flowers. I was disappointed—very much so; for though we had, I must say, flowers, we could rarely do more than pluck a nosegay, such as is sold for a couple of shillings, and not always that. When made up, too, I had the mortification to notice in contemporaneous bouquets, beautiful things that I had not got. My Roses bloomed a little, very late; the Camellias very poorly—mostly dropped off; and I had the mortification of hearing that the temperature that suited one thing did not suit another. The attempt to combine a multitude of things, a great variety in one temperature, did not answer at all. I took to reading, and searched all the books; but none gave me the information I wanted. I can not afford two houses; I want Camellias, and Roses, and fine bouquets all the season; I am willing to forego the Grapes on the rafters, which I see others have, and which I fear would crowd and shade too much. What am I to do?

When should the Roses be potted, to give me a fine bloom by Christmas? What should be the selection of plants to produce the result designed? We have had, from many writers, lists of select Roses, lists of seeds to plant in flower gardens, and so forth; but I do not find any select list of the proper contents of such a greenhouse as I have described. Would you, Mr. Editor, or some of your experienced correspondents, give a few *practical* instructions, with a catalogue of such plants as give the best continual bloom during the cold months; what Roses do the best; and so forth? I confess, under present circumstances, I wish I had my eight hundred dollars back, unless I can get more flowers in winter. A little treatise on this subject is much wanted, which would give the *learner* some real information, and, if it must be so, tell him *how much he must expect to be disappointed!* at the same time that it gives a catalogue of good blooming plants, say the indispensable. QUERIST.

This comes upon us too late in the month to do it full justice, and we cannot allow it to lay over wholly till next month. We will make a few suggestions, which we hope will be taken up and enlarged upon by some of our practical correspondents who are well informed as to the "ways and means" of providing for a flowery greenhouse in the depth of winter.

It may be well enough to state, at the outset, that with a small greenhouse it is not a very easy matter to keep a great variety of plants in blossom, and to come quite up to "contemporaneous bouquets" in all their beautiful things. To attempt too much, will be a certain cause of failure. The plants must be selected with their particular purpose in view. An economical supply of flowers for the months of November and December may be secured by lifting certain bedding plants from the garden, before the frost injures them. Of this class are *Salvias*, *Heliotropes*, *Scarlet Geraniums*, *Abutilons*, *Bouvardias*, *Cupheas*, *Habrothamnus*, *Plumbagos*. If large, fine blooming plants of these are taken up in a moist time, with as much earth as possible around the roots, and placed in pots or boxes where they will have plenty of room, they will continue in bloom for a considerable length of time. They should be placed, after potting, in a close frame, and be shaded from the midday sun until they have taken to their new quarters, and then may be placed on the greenhouse stage.

Monthly Roses may also be used in the same way—Teas, Bengals, Bourbons and Noisettes,—in the absence of a stock properly prepared in pots, for early forcing. These might be planted



in a warm place, and covered with a frame, protected at night with mats, and they will afford some cut flowers for bouquets until the weather sets in severe. A small stock of Chrysanthemums is indispensable for the early winter months, up to Christmas. The Pompones are the best. If they have been grown in pots, and plunged in the garden during summer, all the better. If planted out, they must be taken up and managed as directed for bedding-plants. They must be near the light, and have abundance of water, with liquid manure occasionally.

A good supply of single Hyacinths, early Tulips, and Narcissus, should be provided. Pot them in October for early flowering. After potting, plunge them in sand or leaf-mold, covering pot and all until they are well rooted, and begin to push up leaves strongly. Then place on the shelves near the light and water twice a week with weak liquid manure.

Many hardy shrubs force to good advantage. Among these are the *Deutzias scabra* and *gracilis*—the latter especially is a fine thing; the Persian Lilacs, both purple and white; the *Spiraea prunifolia*, double, and the *Reevesi*,—we prefer the latter, but both are good. The *Rubus Gordonii* and *sanguinea*, and the *sanguinea* double force well; and so do the Wiegela, Honeysuckles, &c. All these hardy shrubs should be potted early, and brought into heat gradually, beginning at 50° and getting up, as growth advances, to 70° or 75°.

Among greenhouse plants proper, the Chinese Primrose, and especially the double ones, are an important item, as they take up little room and flower profusely and a long time.

Tree violets are indispensable. They may be kept in bloom finely during the early part of winter in a cold frame well protected against cold nights. This will save house room for something else. Then the Laurustinus, an old and general favorite, trained into miniature trees, as our friend MENAND, at Albany, has them, nothing can be finer; also the *Cytissus ramosus*, the Coronillas, the Acacias, Justicias, Eranthemums, Poinsettias, Euphorbias. The *Bouvardia leiantha* is a fine winter-flowering plant, and so is the *Stevia serrata*, with white flowers. The *Fuschia serratifolia*, too, blooms well; we have had plants lifted from the border in October, bloom nearly all winter in the house.

The Chinese Azaleas and Camellias are considered indispensable, but we have no time at present to speak of their treatment. We will do so if no one else does hereafter.

One great point in winter forcing for flowers is to have a regular, steady, advancing heat, no checks or retrogrades. To this add very careful watering, ventilation, great cleanliness, and keep the plants as near the glass as possible.

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I SHOULD be happy to learn, through your paper, how to start the following ornamental trees and shrubs, and how to protect them during winter:

*Deciduous Trees*.—Ailantus, Catalpa, Judas Tree, Kentucky Coffee Tree, Magnolia, Pawlonia. (1)

*Evergreen Trees*.—Japan Cedar, Austrian Pine, Silver Fir, Norway Spruce, Balsam Fir. (2)

*Deciduous Shrubs*.—Althea frutex, Buckthorn, Upright Honeysuckle, Privet, Japan Quince. (3)

*Evergreen Shrubs*.—Box tree. (4)

*Climbers*.—Trumpet Flower, Chinese Wistaria. (5)

What is the most successful method of propagating the Briar Rose for stocks? (6) DANIEL LEE.—*Normandale*.

(1) Ailantus, Catalpa, Judas Tree, Kentucky Coffee Tree, all from seeds; sow in the spring. *Magnolia tripetala*, *acuminata*, *glauca*, and all the American species, from seeds; the purple *conspicua*, and the Chinese species, from layers and seeds, and by budding, grafting and inarching, on plentiful sorts. *Pawlonia*,—the best way is from seeds, as the seedlings are more hardy. So far it has been more propagated by cuttings of the roots.

(2) Japan Cedar, from seeds; plants from cuttings are not good. Austrian Pine, Silver Fir, Balsam Fir, and Norway Spruce, from seed. We would advise seeds of evergreens to be sown in shallow boxes of light sandy soil, early in spring. Keep them shaded from hot sun until they have become hardy enough not to "damp off."

(3) Altheas, Upright Honeysuckles, and Privet, from cuttings, made in winter and set in spring. Japan Quince from suckers, and from cuttings of the roots.

(4) Box tree, from cuttings.

(5) Trumpet Flower and Chinese Wistaria, from cuttings of the roots.

(6) Propagate the Briar Rose from the seed, if you can get them. Sow as soon as ripe. If no seeds, layer the young shoots during summer as fast as they grow. Young plants in boxes can



be wintered in a dry cellar. Beds of tender seedlings likely to be cut down by frost, may either be covered thickly with dry leaves or taken up and laid in a cold frame well protected, and be again planted out in the spring.

CAN you tell me how to construct an oven for drying fruit? A SUBSCRIBER.—*Cuyahoga Falls, Ohio.*

We have copied, on another page, a description of a very good contrivance. It strikes us as the best thing of the kind we have heard of.

### Horticultural Societies, &c.

THE HORTICULTURAL AND AGRICULTURAL EXHIBITIONS.—We call the particular attention of our readers to the great Annual Exhibitions to take place this fall. Many, we fear, are not aware of the advantages to be derived from these gatherings, when properly conducted, and well attended by both Fruits and their Cultivators. Not only is an acquaintance formed with the different varieties of fruit, but with the same varieties grown in different localities, and under different circumstances; and an opportunity is also presented for the interchange of opinions among Horticulturists and Cultivators generally, that can but prove eminently beneficial. We give in this number a list of the principal Exhibitions, so far as ascertained.

The *American Pomological Society* meet at Boston September 13th. The Massachusetts Horticultural Society hold their Fall Exhibition at the same time. This will be the great Horticultural gathering. We expect to meet our friends from all sections of the Union at this great National Horticultural Jubilee.

The *North Western Pomological Convention* meets at Burlington, Iowa, Tuesday, Sept. 26, and continues in session four days.

The *Wisconsin Fruit Grower's Association* meet at Milwaukee about the 1st of October.

The *New York Horticultural Society*, and the *American Institute* unite with the New York State Agricultural Society in the Fair to be held at Hamilton Square, in the city of New York, on the 3d, 4th, 5th and 6th of October.

Michigan, at Detroit,.....	Sept. 26, 27, 28, 29	Connecticut, at New Haven,.....	Oct. 10, 11, 12, 13
Ohio, at Newark,.....	" 19, 20, 21, 22	Indiana, at Madison,.....	" 4, 5, 6, 7
Vermont, at Brattleborough,.....	" 13, 14, 15	Iowa, at Fairfield,.....	" 25.
Kentucky, at Lexington,.....	" 12 to 16	Wisconsin, at Milwaukee,.....	" 4, 5, 6, 7
Pennsylvania, at Philadelphia,.....	" 27, 28, 29	New Hampshire,.....	" 3, 4, 5, 6
Western Virginia, at Wheeling,.....	" 13, 14, 15	Maryland, at Baltimore,.....	" 3, 4, 5, 6
Lower Canada, at Quebec,.....	" 12, 13, 14, 15	Georgia, at Augusta,.....	" 23 to 28
Upper Canada, at London,.....	" 26, 27, 28, 29	Missouri, at Booneville,.....	" 2 to 6
Illinois, at Springfield,.....	Oct. 3, 4, 5, 6	Springfield Cattle Show, Ohio,.....	" 25, 26, 27

SUSQUEHANNA AND CHEMUNG VALLEY HORTICULTURAL SOCIETY.—At a meeting of the Board of Officers of this Society, held pursuant to notice, at Elmira, on the 4th day of August, it was resolved to hold a Fall Exhibition at Ely's Hall, in Elmira, on the 15th day of September, one day and evening. A Premium List was made and ordered printed, together with regulations and Committees, which can be had on application to any of the officers of the Society.—Liberal Premiums are offered on all the different kinds of Fruits, Flowers, Vegetables, Wines, &c. The following Committees were appointed:

*Committee on Fruits*.—R. B. Van Valkenburgh, Bath; H. Luce, Elmira; J. S. Bush, Tioga, Pa.; H. D. Rice, Elmira; G. D. Williams, Corning.

*Committee on Flowers*.—D. L. Ward, Towanda, Pa.; S. M. Rexford, Binghamton; S. B. Rowley, Corning; Mrs. L. Winton, Havana; Miss A. Arnot, Elmira.

*Committee on Vegetables*.—A. I. Wynkoop, Chemung; Dr. N. Winton, Havana; E. S. Sweet, Owego; Col. Geo. Farnham, Addison; Silas Fordam, Factoryville.

*Committee on Native Wines*.—F. Hall, Elmira; J. F. Donaldson, Pa.; Asher Tyler, Elmira; P. C. Cook, Bath; E. P. Brooks, Elmira.





FRUIT OF THE PLANT.



## On Pruning Trees at the Time of Transplanting.

HOW should trees be pruned at the time of transplanting? or should they be pruned at all? are yet open questions among planters. As the subject will at this season of the year be one of the most general interest, we propose to offer a few remarks on it.

The objects in view in pruning a tree at the time of transplanting are three-fold. First, *The removal of all bruised and broken roots and branches.* The necessity for this is obvious and indisputable: bruised and broken roots, when planted without being dressed, must decay and interpose very serious obstacles to the formation of new roots; they should therefore always be pruned off closely to the sound wood, and with a sharp knife that will make a smooth, clean cut, the sloping surface of which should invariably be on the under and not on the upper sides of the roots. In making the cut, the knife should be laid to the under side of the root, and drawn upward. The young roots which subsequently spring from the cut end of the root, as from the end of a cutting, strike downward at once, as is natural. The reasons for pruning off broken or bruised branches are equally obvious. A broken branch left on a tree will produce an unsightly and in some cases a dangerous scar; but if it be pruned off close to the body of the tree, or to a sound bud, the wound will soon heal over or a new shoot will be produced. It is very common, in pruning hastily, to leave small portions of branches without eyes. These, instead of producing new shoots, die off, and the new wood growing in around them produces unsoundness that in many cases brings the tree to an untimely end.

The second object in pruning is, *to mold the tree to the desired form.* Trees coming from the nurseries are seldom in the exact shape that the planter wishes. They have too many side branches, their heads are too low or too high, or they have some other defect which the knife must remedy. Now the question comes up, How far is it judicious to attempt the formation of the tree at the moment of transplanting? Several points must be considered. If the trees are standards for the orchard, and they happen to be somewhat slender in proportion to their height, it would be unwise to prune off *closely* any side branches they might have, because this would direct the future growth to the top, and urge the tree still further out of balance and proportion. In such cases, the aim should be to increase the growth of the *stem*; and this can only be done by retaining two or three good eyes or buds of every side shoot, or of a sufficient number of the strongest and best, and by reducing the attracting power of the branches at the top. The influence of this is seen in the case of forest trees planted in the street, where the entire head is sawed off at planting, and nothing but a bare pole or pollard left; the growth is thrown into the trunk, which soon becomes covered with new shoots, and increases its diameter rapidly. If the tree has been pruned up too high in the nursery, making the head higher than desired, a new head must be formed lower down by cutting back the tree; but whether it is better to

attempt this at the moment of transplanting, or wait until the tree has taken root, and is capable of making a vigorous growth, is a question. This is a point of some importance. We know that newly planted trees push but feebly at best, in comparison with those well rooted, and that the shoots produced the first season make a very indifferent frame work for the tree. We have considerable experience on this very point, and we have come to the conclusion that it is much better to defer the pruning which is to produce the final and permanent form of the tree, until the second year, or until the tree shows unmistakable signs of being well rooted, and in a condition to make vigorous growth. But care must be taken to preserve and encourage, as far as possible, young shoots with active buds on the parts where we intend to produce the new head; because *old* wood, in which the buds have become in a measure dormant, does not throw out branches with desirable rapidity and vigor.

If, on the other hand, the head be too *low*, the first impulse would naturally be to prune it up. But this demands some caution. Where branches of considerable size are pruned off, when the tree is transplanted, and consequently unfit to make much growth, the fresh surface of the wounds dry up, and do not heal over quickly, as when the tree is in an active and vigorous condition. Beside, buds are essential to growth; and if too great a proportion of them be removed at once, the power of the cells or sap-vessels is impaired, and they cannot transmit the nutritive fluids from the roots upward. The roots, too, lose their activity, and general stagnation and debility follow. The better way is to reduce the head by thinning out some branches and shortening others, especially the lower ones; and in the season following, or when the tree has fairly recovered from removal, the large branches may be removed and the stem formed higher up; the upper shoots allowed to remain having sufficient power to maintain the functions of the different parts of the tree in full force and vigor.

The third object in pruning at the time of transplanting, is, *to restore the balance or proportion between the roots and branches, which has been disturbed in the process of removal.* A transplanted tree, no matter how carefully or skillfully it may have been operated upon, has its system materially deranged. The roots may neither be bruised or broken, nor the fibres dried or injured by exposure; and yet the ordinary functions of the various parts, and their reciprocal action and influence upon each other, can not but be in a measure arrested for a time. The roots can not abstract nutriment from the soil, and convey it through the trunk and branches, to supply the demand of the leaves, until they have taken to their new position and emitted new rootlets or feeders. Until this takes place, the demand of the leaves must be supplied from the stock of nutriment previously laid up in the cells, just as we see young shoots subsisting for a time on trees that have been cut down or torn up by the roots. As long as any sap remains in the cells, and can find a passage to the leaves, the latter continue green and healthy; but as soon as the sap is expended, and the cells dried up, the leaves wither, and vitality terminates. Transplanted trees are, until re-rooted, in the same situation, nearly, as trees cut down or rooted up and left on the surface of the ground—that is, they must rely mainly on the sap existing in the cells



before removal. Now it is plain that the more of buds and leaves there are on a tree, the greater will be the demand upon its stock of sap or nutrition, and *vice versa*. Hence the reason for recommending to reduce the tops of trees at the time of transplanting. For this reason we can not transplant deciduous trees safely while in full foliage. Even Strawberry plants root better by having a portion of their leaves removed; and hence the use of bell-glasses and other contrivances to prevent evaporation from the leaves of newly-inserted cuttings. A tree transplanted with a small number of roots, or damaged roots, and a branchy top, will suffer from the evaporation of the leaves, just as a cutting with leaves would if it were freely exposed to the air, though perhaps not to the same extent. Some trees will bear planting with smaller roots and larger tops than others—such, for instance, as the Poplar and Willow, and all those that root easily and rapidly, and have large sap-vessels through which nutriment absorbed by the roots can pass quickly to the leaves.

But we must remember, too, that leaves are necessary to the growth of roots. It is true that new roots are formed in the absence of leaves. We can see this illustrated in the case of early autumn-planted trees or cuttings: yet these roots would not attain any considerable development, nor survive long without the action of the leaves; for these may be likened to the animal stomach, in which the indispensable process of digestion takes place. No matter how abundant or healthy may be the roots, or how liberal the supplies of nutriment presented to them, if the leaves be not present to draw it upward and assimilate or *digest* it, growth can not continue—the roots will cease to lengthen, and ultimately perish. This is forcibly demonstrated in the case of trees that have been stripped of their foliage by insects, or some accident,—the roots cease to grow; but as soon as new leaves begin to appear, new roots are formed simultaneously: and if one side of a tree be stripped of its foliage, the roots more directly in connection with that side will cease to grow until new leaves appear. In propagating plants from cuttings, it is necessary, in many cases, and indeed in almost all cases where young wood is used, to leave a certain number of leaves. Cuttings that root without leaves are those of a soft nature, having large cells or sap-vessels full of organized matter or tissue capable of developing roots and sustaining them until the leaf-action commences.

From all this we see how important are the leaves, and how easy it would be by excessive pruning to hinder rather than promote the formation of roots. There is a medium which should be aimed at in pruning, to induce growth after removal. If the roots are much injured, or naturally meagre or defective, a very small number of active buds should be retained, just sufficient to stimulate and sustain circulation of the fluids. In such cases it may be necessary to cut back every young shoot to one or two eyes. Where the roots are abundant and sound, it will suffice to cut out the weak inside shoots, and shorten the stronger ones about one-half. In doing this, a large number of buds are removed, and whatever force there is in the tree is thrown into the remaining shoots, and young wood will be formed where we should have had nothing but leaves if the tree had not been pruned. The growth of young wood always favors the formation of roots. If we examine trees now that were transplanted



last spring, we shall find that the roots are in proportion to the number and strength of the young shoots.

The great object in pruning to promote growth is *to direct the sap into a smaller number of channels, and thus increase its force*. If a tree, for example, has 500 leaf-buds to draw upon its sap, and we cut away 400 of them, the remaining 100 will of course receive a far greater proportion than they would have done, and will consequently be enabled to make new wood; and experience teaches us that young shoots with their large cells, luxuriant leaves, and great vital activity, act far more powerfully on the roots than the small, lean foliage of trees merely living but not growing. We know how cutting back acts upon stunted trees. A three or four years old Apple or Pear tree, for example, if cut down nearly to the ground, will, in one season, make a growth equal to that of two or three seasons under ordinary circumstances; and this is simply because its whole vital force is concentrated in one point. The sap rushes there, and large cells are formed immediately, in which a rapid and powerful circulation takes place.

All operations upon trees should be performed cautiously, because whatever produces a sudden or violent change in their condition, cannot fail to be attended with a derangement of their wisely and beautifully adjusted organization, and this derangement must be more or less injurious to their healthy existence. Every man who takes his knife in hand to mutilate a tree, should bear this in mind, and weigh carefully the consequences of every cut. We intended to have referred to the opinions of experienced and skillful arboriculturists on this subject, but we can not at present devote more space to it. What we have said will, we trust, induce reflection and observation on the part of some who have heretofore been too indifferent.

## THE EASTER BEURRE PEAR.

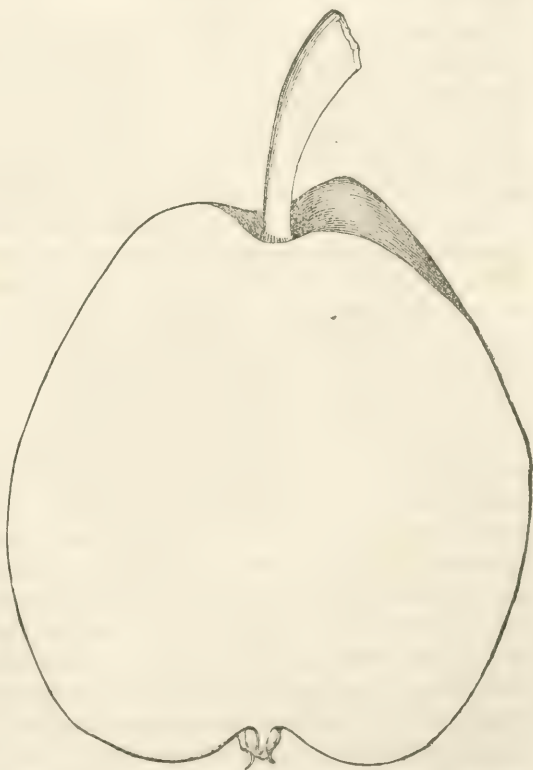
SYNONYM: *Doyenné d'hiver*, the popular French name.

THE culture of winter Pears has hitherto been much neglected. We are surprised that some enterprising cultivators do not plant extensively. Our large cities would consume immense quantities, and they would command greater prices than any other fruit. One reason why they are not more cultivated is, we presume, that they require more care and labor to prepare them for market. The autumn Pears, such as the *Virgalieu* (*White Doyenne*), can be picked from the trees and carried directly to market, while the winter varieties would require to be stored away for a length of time, and house-ripened. And then the supply of autumn Pears is still small, and prices as high as cultivators can reasonably desire. We suppose that we shall not witness any extensive culture of the winter sorts until Pear culture in general has become much more extensive and better understood. There are intelligent amateur cultivators, not a few, who even at this day express a disbelief in the existence of really fine, melting, winter dessert Pears. Not one in five hundred, or we may safely say

five thousand, of those even who have gardens, has yet tasted a fine *Winter Nelis*, a *Lawrence*, a *Beurre d'Arenberg*, a *Glout Morceau*, or an *Easter Beurre*; yet these are all delicious, melting Pears, that will ripen in a good dry cellar without any extra care or attention whatever.

The *Easter Beurre*, which we present as our frontispiece, is a noble fruit—by far the finest, as we think, of all long-keeping varieties. That it has attracted so little attention among amateur cultivators is really surprising; for it succeeds well here—quite as well as in France or Belgium, as far as we know of its being tested. The Pomological Society has not recommended it in any way, while they have placed on their lists other varieties of incomparably less value. For a few years past, however, it has been pretty well disseminated by the nurseries, and we shall very soon have some results from different parts of the country. We think it a fruit peculiarly adapted to the south; for it seems to endure dry and warm weather exceedingly well here, neither shedding its leaves nor fruit prematurely; and then it would keep up a supply for the table for months after the autumn Pears are gone, even if it were not to keep till April or May as it

does here in the north. We must say, however, that according to our experience, it is larger, of finer quality, and ripens better, when grown on the Quince than on the Pear stock; and this is the case in Europe, too. On the Pear stock the fruits seem not to receive a sufficiently liberal supply of nutriment to bring them up to the most perfect state; they are comparatively small, with large, gritty core, and instead of ripening off freely, and becoming buttery and melting, many of them shrivel and dry up, as Pears do that have been prematurely gathered. The *Duchesse d'Angouleme* is similar, to some extent; it is, according to our opinion, infinitely superior on the Quince. We therefore recommend its culture on the Quince stock, and that whether



EASTER BEURRE PEAR.

for market or for private use. The tree is a good grower, moderate at first, but improving every year, and finally makes a large, vigorous tree on the Quince; and

if kept under high culture, it will produce annually very heavy crops. It has all the characteristics of a profitable variety.

Fruit — very large, roundish-obovate, often inclining to oval. Stalk — rather short, stout, and deeply inserted. Calyx — closed, slightly sunk in an irregular, plaited cavity. Skin — greenish-yellow, becoming quite yellow in good specimens, with numerous brown dots, and a brownish red cheek when exposed freely to the sun. Flesh — melting, juicy, with a sprightly vinous flavor. Tree — vigorous and erect, with bright reddish-brown shoots, sprinkled with russet dots. Leaves — large and folded. The wood of yearling shoots usually shows prominent buds or spurs on the lower parts the first season, and have a forked appearance by making a second growth, as the *Beurre d'Aremberg* and some others do.

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### THE NEW ROCHELLE OR LAWTON BLACKBERRY.

MESSRS. GEO. SEYMOUR & Co., of Norwalk, Conn., sent us a colored drawing of this fruit, accompanied with the following observations on their mode of culture and treatment. We had the annexed woodcut prepared from their drawing:

"We prepare the ground by plowing and manuring as for any ordinary crop. We then take young plants, cut them back to within six inches of the roots, and plant in rows eight feet by four apart. The first season we use the plow and cultivator both ways between the rows, keeping the ground in good tilth. Next, or the second season, we train the plants into the four feet spaces, leaving the eight feet spaces for the plow and cultivator to work in. When the plants are five or six feet high, pinch out the leading shoot to induce the growth of vigorous side branches. In training, we prefer the bending mode to the upright.

"We regard this Blackberry as a very valuable addition to the list of small fruits, because it is so simple in its cultivation, bears regular and abundant crops, and when perfectly ripe is of a highly agreeable flavor."

We have only to add that from what we have seen and heard of this fruit, it cannot fail to be an object of very profitable culture within any reasonable distance of large cities. It ripens after Strawberries and Raspberries, and before Peaches, and therefore comes most opportunely as to season. And then its cultivation must be of the easiest possible kind — only give it rich soil, and keep it clean and well cultivated, and an abundance of large fruit is certain. No one need expect such wondrous large fruit, however, as people have witnessed at New Rochelle and Norwalk, in ordinary soil and with ordinary culture. Manure must be applied unsparingly, and the ground must be kept clean and friable as work can make it. The Blackberry matures in midsummer, when we have usually very warm and dry weather, and any neglect of the soil would render the fruits worthless. We do not forget how Col. STODDARD astonished people with the size of his *Alpine* Strawberries. It was thought he had a new sort, when in fact he merely cultivated a little better than others. *Rich soil and clean culture* are indispensable to the growth of large fruits of any kind.





THE NEW ROCHELLE OR LAWTON BLACKBERRY.

## GARDENS AND GARDENING AT MONTREAL, CANADA.

BY A PRACTICAL OBSERVER.

A PROFESSION offering such rich materials, which almost every day are enlarged by new and interesting discoveries, opens a large field of study and labor, both to the theoretical and practical man; and we think that every one gifted in the least with a taste for natural beauty, should range tasteful gardening with the most beautiful of the arts. It is painful, however, for us to confess that our gardens—we mean those of the wealthier in this city and its vicinity—are, generally speaking, in a sad state in comparison with those of cities of the same dimensions in the United States. The want of taste is so prominent, that often the finest dwellings and villas are seen surrounded by miserable-looking, spoiled gardens, if not even in the midst of cabbage fields; which latter certainly, we should think, could not be considered as fit objects to ornament the immediate neighborhood of a fine building, and in our opinion it helps to degrade it; whereas, a garden handsomely laid out under tasteful principles would highly improve it, and give it an elegant appearance. We do not mean to do away entirely with the kitchen garden. We know even that under certain circumstances a culinary garden, properly placed, can be made both useful and ornamental, without in the least destroying the view in the immediate neighborhood of a dwelling; but to find out the way of doing so, we need to study a little of what we would call the poetry of gardening, which does not appear to be the task of the greater part of the proprietors of the Montreal gardens, which in many instances might be turned into delightful residences, if entrusted to the hands of experienced persons.

However, a few gardens are exempt from this general deficiency, and among these we mention first that of JOHN TORRANCE, Esq., St. Antoine street, where we find a very well kept and properly laid out culinary garden and very handsome flower garden close to the dwelling, which in the summer season is ornamented with some nice old specimens of greenhouse plants, and a fine collection of very pretty annuals. It is particularly worth visiting in the month of June, because of the fine collection and large specimens of Fuchsias which are then in full bloom, and to which the gardener, Mr. HOLDER, as a favorite plant of his, seems to devote particular attention, and indeed with the greatest success. During the winter season will be found in a suitable greenhouse a considerable number of New Holland plants, but, with few exceptions, in rather longish appearing specimens. In one compartment, apparently intended for the growth of stove plants, we find again a collection of the older genera of the tropics in general cultivation, with the exception of a few new and excellent specimens, which unfortunately are hid among Fuchsias and Azaleas, because the stove has to be used both as a forcing-house and stove; but we have no doubt that if Mr. HOLDER had a fair opportunity, he would show us something very superior.

The flower garden of Mr. WM. LUNN, Sherbrooke street, which is generally tastefully planted, is surrounded partly by long, well put up vineries, and a long but narrow green-house, where all sorts of market plants, such as Roses, Pelargoniums, Verbenas,

and other herbaceous varieties, are grown plentifully; but as the whole establishment is intended for market purposes, we see even in the flower garden French Beans, Raspberries, and other marketable fruits and vegetables, which must impress upon the mind of the visitor something less than a tasteful geniality. The spacious kitchen garden is planted with some fine bearing Apple trees of very good varieties. We purposely mention this garden among our first, because the people of Montreal think it one of their best, as they never find a want of vegetables there.

As for amateurs fond of seeing well-grown plants, we would direct their attention to the fine collection of JAMES FERRIER, Esq., under the care of Mr. TAYLOR, a very worthy young Scotchman, who deserves every possible credit for the zeal with which he endeavors to recompense the generosity of his kind employer. In an elegant conservatory, though not entirely suitable for the growth of plants, we find, particularly in the months of February and March, when Camellias, Azaleas, and some of his handsome New Holland plants are in full bloom, that no place is more worthy a visit than this. Among some of his finest green-house plants we only mention some very handsome Conifers, viz., *Araucaria excelsa*, *Cryptomeria Japonica*, *Cupressus funebris*, and several other smaller specimens, beside some elegant Acacias, such as *pubescens*, *armata*, *alata*, *grandis*, &c. But we observe, in a small stove which joins the conservatory, even some well-grown new and rare plants, as, for instance, that new and splendid creeper from Java, *Cissus discolor marmorea*, *Cephalotus follicularis*, *Begonia xanthina*, *Hydrangea Japonica*, *foliis, variegatis*, and several others. But we find the surrounding of the dwelling in the summer season in a rather desolate and apparently somewhat neglected state, because of its having been previously overplanted with trees, the roots of which seem, as is often the case, to have grown to the heart of the proprietor; so much so, that at present they could not be cleared away without affecting it severely.

Highly worth notice is the new garden, only since last year arranged, of one of the most tasteful and enterprising gentlemen in this city; we mean that of HENRY CHAPMAN, Esq., Durocher street. Beside a handsome little flower garden luxuriantly ornamented with the best annuals, herbaceous plants, hardy shrubbery, &c., we find a very well constructed green-house and stove, which is filled with the best plants of latest introduction; and as the young and industrious gardener, Mr. BERGHOLZ, a German, is a first rate propagator, we find all the newest varieties in great multitudes about the place; so much so, that his employer, as we learn, is inclined to sell or exchange the plants of which he has a large stock, which certainly will be a great advantage to those who are anxious to get the newest varieties and their correct names; and, in fact, we are aware of no place in Canada or the United States where propagation is conducted with greater care and attention, nor where it is rewarded with better success; so that even Mr. STUART LOW, a noted English nurseryman, at a recent visit to this city, could not help placing this establishment at the head of all those which he visited in America, as to the quantity of its new and well-grown valuable plants. The stock of New Holland plants is well supplied, and in good propagation, all nice bushy plants. The same may be said about the collection of herbaceous plants, among



which we may mention some of the new Phloxes, such as *Roi Leopold*, *Crytæon*, *Madam Lefèvre*, &c., the finest and newest Chrysanthemums, Dianthus or Carnations, Dielytras, Bellis or German Daisies, &c. We notice, further, a handsome collection of Conifers, viz., *Sarc-Gothæa conspicua*, *Libocedrus Chiliensis*, *Abies Jezoensis*, *Araucaria*, *Cupressus*, &c.; a large collection of Acacias, and the newest and best Camellias and Azaleas. Most interesting is a visit to the stove, where we see at the entrance a small aquarium with *Nymphaea dentata*, *Ortgiesiana rubra*, *caerulea*, some *Pontederias*, *Andropogon Schœnanthus*, and several of the Cypericaceæ. Among the vigorous and carefully propagated stove-plants we find all the newest and best, such as several of the new and finest of the Ficus tribe; *Begonia Prestonensis*, *miniata*, *xanthina*, *macrophylla*, *stigmosa*, &c.; the splendid *Aphelandra Leopoldii*, *squarrosa citriosa*, *Portiana*, &c.; *Dracæna nobilis*, *maculata*; large specimens of the elegant *Hydrangea Japonica foliis variegatis*; *Clerodendron Bungei*; the beautiful *Maranda Warszewitzii*; the interesting Fly-trap *Dionæa muscipula*; *Cephalotus follicularis*. Among the various creepers the most beautiful *Hexacentris Mysorensis*; the finest of all the *Passifloras*, *P. Decaisneana*; *Hamadrytion nutans*; *Cissus discolor marmorea*. As for other fine showy plants, *Lopezia macrophylla*, *Musa coccinea*, *Quadrya heterophylla*, *Saurauja macrophylla*, *Pandanus graminifolius*, *Bresia Madagascariensis*, *Alopectus Schlimmei*, are among a number of the finest flowers. Of the newer Gloxinias in vogue, *Achimenes Chirita*, &c. Mr. BERGHOLZ, whose zeal and knowledge collected all these in not more than one year, deserves every possible credit, and we wish him every success in his endeavors to make Montreal a place where persons so devoted to the profession as he is may find opportunities to study and admire the vegetable kingdom in all its grandeur, in which task he is most generously supported by his kind employer.

There are several other gardens known as fine in Montreal, the economical display of which, however, is so prominent, that we forbear expressing our opinion upon them. We can not, however, refrain from mentioning the highly creditable and oldest nursery and seed establishment of Lower Canada, that of Mr. GEORGE SHEPHERD, a person known among his fellow citizens as one of the most honest and industrious of men, who by his steady perseverance has as yet been the only individual who has turned nursery-gardening in this rigorous climate to any profit. We find him always ready to aid newly-arrived young gardeners, and gentlemen applying to him, with the most practical advice about everything relating to gardening in this country; and his general and thorough knowledge of his profession makes him the most able to do so. In his nursery at St. Catherines, near the foot of the mountain, we find a fine stock of the best varieties of keeping Apples suitable for this climate, in young, saleable trees, with a collection of all sorts of shrubs adapted to this country; and in his store, 33 Notre-Dame street, garden and field seeds, either of his own raising or imported from some of the best establishments in Europe. Lately the Messrs. COCKBURN & BROWN have established something similar, and seem not to be afraid of any expense in increasing their stock by considerable importations of fruit trees, shrubbery, and Roses from Europe and Upper Canada. Since last spring they have opened also a seed

store; and we wish them the good success which we wish to all gardening around Montreal.

[We publish the foregoing letter from a practical and observing man who feels interested in the state and progress of gardening around him. We must say, however, that some of the criticisms on gardens are not exactly to our taste, though we do not dispute their correctness. We have not been in Montreal for some years, but we remember, when there, being forcibly struck with the taste and good keeping of many gardens, and especially with the excellent vegetables shown in market. We think that, considering the rigorous climate of Montreal, her gardens will compare not unfavorably with any American city, and in private green-houses she is in advance of any other of an equal population.—ED.]

## REMARKS ON GRAPERIES AND GRAPE-CULTURE UNDER GLASS.

BY JAS. COWAN, GARDENER TO J. H. RIDGLEY, ESQ., HAMPTON, BALTIMORE, MD.

CONSTRUCTION OF THE VINERY.—Instead of the common practice of building the front wall of the house on pillars, I would advise that a solid wall from the foundation be made, as I consider an inside border to be more injurious than beneficial to the roots of the vines. The principal cause of the shriveling of early-forced Grapes is, in my opinion, owing to the roots being over-heated, and not having sufficient moisture. When they extend far into the interior of the house, it is impossible for even the most experienced gardener to guard against this completely.

Having given my objections to an inside border, I may add that building a wall will be found a saving of expense. I consider upright sashes of little or no use in front, and I would recommend the back wall to be built much higher than it commonly is, as the vines always fruit best at their extremities. I would also have the pathway of the house paved with stone, which would certainly look much better, and be less expensive in the end. Where there is only one house to be erected, it would be much better to have it made circular in front, as it would be more exposed to the sun's rays.

With regard to the construction of the heating apparatus, I would recommend the hot-water instead of the smoke-flue system, and the use of Week's Conical Boiler. Although it is generally allowed that many a good bunch of Grapes has been grown by the heat of an old smoke-flue, the hot-water system is universally adopted in all new vineries throughout Great Britain. WEEK's boiler is formed of 2½ to 3-inch pipes, all connected, with the furnace in the center. The body of water being small, and the surface of pipe large, the water heats soon, and circulates rapidly. I would also have the furnace or fireplace made much larger than is usual, so as to afford sufficient space for a large, slow-burning fire, in order that the operator may have it in his power to keep a steady heat in the house. When the fireplace is small, he has to stir it often, to keep up the desired heat in cold weather.

**FORMATION OF THE BORDER.**—The site on which the house stands has a gradual inclination to the south, twenty inches in thirty feet, which is very desirable, in order to carry away rapidly all superfluous water. The border is fifteen feet wide and three feet deep; it is dug eighteen inches below the original surface, and raised as much above. In the bottom are placed twelve inches of stones, to form drainage, and these are overlaid with some rough material, vegetable matter, or turf, to prevent the earth from adhering to them. The earth which forms the border was the top-spit taken from the corner of an old pasture which the cows frequented, and which was undoubtedly very rich, mixed with a goodly quantity of well-rotted animal dung (I believe cow-dung to be the best), together with a liberal quantity of bone-dust or something equivalent. I also approve of having a drain along the border, near the center, on a level with the stones at the bottom of the border, open at each end, in connection with several intersecting ones, into the interior of the house, in order to dry and convey a current of air through the border, which is most assuredly beneficial to the growth of vines. I am much in favor of having some rough material mixed with the earth in the border, such as old lime, limestone, or broken bricks, to keep the soil loose.

**PLANTING.**—Of course choose good, healthy vines. It is necessary, when planting, to lay the roots in some nice light earth, say a mixture of leaf-mold and white sand. White sand answers the purpose best, because it is free of oxide of iron. Particular care must be taken not to plant too deep, as nothing is more injurious. The point of divergence of the ascending and descending axis—that is, of the root and stem—should always be even with the surface. I would have good, strong vines planted about six or ten inches from the outside of the wall, and introduced through holes made in the building six inches above the surface of the border, and from four to six inches in diameter, with a projection toward the inside. It is customary to plant a vine for each rafter. I prefer one in the center of each alternate sash, in order to grow one rod for each rafter in the house, as the less the roots are interwoven with each other, the better.

I have an abundant supply of water during the warm weather, both inside and out,—the former to keep down insects, which are very numerous in this country, and the latter for the use of the border. I have been in the habit of syringing in the early part of the day, instead of the afternoon—say about eight o'clock, in clear weather; and in dull, cloudy weather, the operation was omitted. During the absence of rain, I thoroughly soaked the outside border about three times a week, which border has an excellent covering of strong cow-dung, which greatly increased the vigor of the vines.

Forcing-houses should receive air as frequently at the front as at the top; and when air is admitted at the front, it should be at ventilators opposite the pipes or flues, in order to have a circulation of heated air through the house, resembling that of their native country.

**PRUNING.**—I consider this one of the most important operations in the management of vines. There are various methods adopted by gardeners, with equal success; but there is undoubtedly one system superior to all others, and perhaps that has not



yet been ascertained. However, there is one way of pruning the rod like a walking-stick (the renewal or long cane system), and another with spurs of one eye or more. The vines here, that I am alluding to, were pruned in the former way, and have done remarkably well this year. I measured some leaves of the *Black Hamburgh*, which I found to be 13 by 13 inches; and those of the *Muscat of Alexandria*, 13 by 14 inches, and wood three inches in diameter, of this years growth, and fruiting uncommonly. The bunches of course are not large, which could not be expected the first year. One bunch of the *Royal Chasselas* measures 12 inches in length, and several berries of the *Black Hamburgh* measure  $3\frac{1}{2}$  inches in circumference.

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## GRAPES AND ROSES.

BY WILLIAM H. SCOTT, ADRIAN, MICH.

A CORRESPONDENT from Michigan asks: "Why is it that some of your Rochester pomologists so set up the *Clinton* Grape?" adding, that it is hardy and prolific; and that is all he can say in its favor. To say that a *moderately* good Grape is hardy in all of our northern States, is what can *not* be truthfully said of any of the most noted sorts—the *Catawba* or *Isabella*, for instance. It *can* be said of the *Clinton*; and because it is very comfortable to have the second best when the best fails, the Rochester pomologists, or the Michigan pomologists, may well recommend the *Clinton*. During ten years observation of the habits of this Grape, I have several times seen large vines of the *Isabella* nearly killed to the ground by autumnal frosts, while the *Clinton* remained quite uninjured. The latter has never failed to produce large crops. There is something foxy in its flavor, especially if not thoroughly ripe; but it has much less pulp than the *Isabella*, and is wanting in that peculiar slimy coating that envelopes its pulp.

The *Catawba* is seldom ripened here on trellises. In this latitude it should always be grown upon close walls with a southern exposure. I am so thoroughly convinced of the superiority of this mode of culture, that I will have no more training on arbors or trellises. Grapes trained on the walls of my buildings are quite two weeks in advance of my neighbors' upon trellises. The *Alexander* is so much better when cultivated in this way, that a noted pomologist failed to recognize the fruit, although he had long been accustomed to see it cultivated in the best wine region of the States. Notwithstanding the past winter was a very trying one, not three inches of the extremities of the large vines growing upon the sides of the barn were affected.

This has been a hard season for Roses. The June bloom was a good one, but the Perpetuals have suffered from long drouth; and now, while they should be making a good display, are almost roseless. Among a not very large variety—say twenty kinds—I have found quite a diversity of good qualities. For several years the *Prince Albert* has played treacherous in its June flowering. It has shot out its plump buds early, numerous, and full of promise; but while my expectations were

fully awakened in view of the plump, healthy Rose just at hand, the partially-developed bloom either refuses to go further or blasts;—not one really good Rose on eight or ten standards. But later, when June Roses are gone—when the *Prince* has lost all his plebeian companions—he deigns to put on full costume. Through July, imperfect specimens of this Rose have been as difficult to find as the perfect were in June. In a season usually moist it has continued to bloom faithfully until severe frosts. In the smallest collection of Roses it should be one. The *Madame Laffay* has bloomed better early, but not so well late in the season as the *Prince Albert*. *La Reine*, though large and very showy, has not been a reliable bloomer. A large, bright, double, cherry-colored Rose, which I suppose to be *Duchess of Sutherland*, is a great favorite with us all. It is a free and continuous bloomer, and in most respects better than the *Laffay*. The *Marquis Boccella* is a good Rose of its color—quite pale pink—and does very well to make variety of color with the darker Roses, say with *Prince Albert* and *Giant des Batailles*. I have not had uniformly well-developed Roses of the *Boccella*. Among the semi-hardy Perpetuals, I could poorly dispense with the *Solfutaro* and *Amie Vibert*. Among all the Perpetuals, none have bloomed so profusely, during many years, as the latter. From the beginning of the Rose season to cold weather, it often bears as many as fifteen or twenty Roses at one time, on its long, forked stems. The *Amie Vibert* should have a good background of green, as it lacks leaves. The *Solfutaro* is somewhat more tender here. It is the best of the cream-colored family of Roses, and certainly one of the best of all Roses. A thick covering of evergreen boughs is all the winter protection it ordinarily requires. Two years ago last winter, I nearly smothered my best bush with covering; last winter being more trying, I had nearly lost it by following the opposite practice.

With two or three exceptions, my Roses are budded. Several years' experience in Rose-culture has given me no inclination to resort to varieties on their own roots. Nurserymen have repeatedly warned me of the danger of budding, and especially of its want of permanence. In a moderate amateur collection, like mine, budded Roses have many advantages. Usually the Rose roots sent out by nurserymen are rather puny affairs; and, while some of them *never* get large enough to make much display, others are long enough about it to quite weary one's patience. There is little difficulty in finding stocks of the common *Blush* Rose to bud upon; often quite strong ones may be got. It is often quite an object to get a bloom the first year; and if the season is at all propitious, it may be attained by budding late in June, and heading down so soon as the inserted bud shows signs of bursting. During the last ten years I have cultivated a variety of the best Perpetuals upon such stocks, and have not yet found one to fail, either in health or vigor of growth. With slight attention in providing one good stake to support the bush, there is little danger of the top parting from the stock. And this provision must be made, too, for the Rose on its own roots, if the Roses are to show well. It is objected that the standards so got do not last well. I can show budded standards, some of ten and some of twelve years from the bud, apparently quite healthy yet; and I hope to keep them so much longer, by proper attention.

Chip-manure I have found the most universally applicable for the Rose. If only partially rotted, it is somewhat unsightly on the finished lawn, yet it is one of the most efficient of mulchings.

For the sides of a building, the *Multiflora* makes a reliable stock for all the hardy Roses. What more beautiful than the display that may easily be made by a variety of choice Roses on a veranda, or under the roof of the cottage. Of course a climber of such dimensions, if made to depart from its constitutional habit of once-bearing, can not be induced to bloom perpetually without high feeding. When the barn is so placed as to warrant it, it affords an excellent position for a climber of Perpetual Roses. The roots running under its floors will find abundant nutriment.

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## NELUMBium SPECIOSUM.

BY J. G., SPRINGBROOK.

MANY of the readers of the *Horticulturist* will doubtless be pleased to learn that the plant of which I have given the name at the head of this article, proved entirely hardy with us during the past winter, and has been for the few past weeks producing a succession of beautiful pink flowers. The plant is growing in a basin in the kitchen garden, which receives the overflow from the banks, and which is always thoroughly frozen over during the winter. The *N. luteum* is growing by its side, and is just coming into bloom, the plant having been set out this spring. A variety from the Island of Minorca is also growing in this tank. From the color of the leaves, being much lighter than those of the *N. speciosum*, we are in hopes that it will prove the *N. alba*, or some other variety not hitherto known to us. For the seeds of this latter, we are indebted to a lady of Mississippi, who kindly sent them to the proprietor of these grounds.

We have just coming into bloom, in our aquarium, the *Nymphaea corulea*, received from Mr. ALLEN, of Salem, Mass.

The *Stanwick* Nectarine has just fruited with us; and I take pleasure in saying that it exceeds all others, of the melting varieties, with which we are acquainted, in regard to flavor.

Our original plant of the *Victoria regia* is somewhat in repose at this time, having a few weeks since produced, for the present, its last flower (208th). Having decided that it is a perennial, we propose, in a few months, to introduce a young plant into the tank, as a substitute for the old one, the latter no longer producing seed abundantly.

[We are much obliged to J. G. for the information. We are glad to learn that the *Stanwick* Nectarine proves so excellent.—Ed.]

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NOTE ON THE CLADRASTIS TINCTORIA, (*VIRGILIA LUTEA* of MICHAUX.)

BY S. B. BUCKLEY, WEST DRESDEN, N. Y.

IN several numbers of the *Horticulturist*, and various nursery catalogues lately published, the *Cladrastis tinctoria* is called by MICHAUX's old name, *Virgilia lutea*,\* which has been discarded by most botanists, because it is very distinct from a true *Virgilia*—a genus named by LA MARCK in honor of the poet VIRGIL. The name given by MICHAUX, in the infancy of our botany, proving to be wrong, RAFINESQUE formed of it a new genus—*Cladrastis*—in 1825, with the specific name of *tinctoria*, from the yellow coloring matter contained in its wood and roots. The authority of RAFINESQUE has been followed by ENDLICHER, in his *Genera Plantarum*, now acknowledged to be the standard work on botanical genera; and also by TORREY & GRAY, in their *Flora of North America*. There are three species of *Virgilia* cultivated in England, according to LONDON, all shrubs, one of which is a native of Abyssinia, and two of the Cape of Good Hope.

I saw a fine *Cladrastis tinctoria* on the banks of the French Broad river, near Paint Rock, in East Tennessee, a few miles from the Warm Springs in North Carolina. It was nearly a foot in diameter, and about twenty-five feet high, with pinnate leaves, and very large, ovate, deep green leaflets, and flowers much like the common Locust, (*Robinia pseudo-acacia*). This was the only *Cladrastis* I saw during a botanical tour through Tennessee and among the mountains of North Carolina. I also have specimens received from Prof. SHORT, collected on Kentucky river. It is a rare tree, both in the South and South-western States, and seems to be rather rare in the nurseries. Last spring I was told there were none suitable for transplanting in any of the nurseries at Flushing, Long Island. I saw a few specimens in one of the hot-houses of the Messrs. PARSONS, at the latter place, which were raised from the seed, and but three or four inches high, which I was informed were all they had.

While writing of the Messrs. PARSONS, I must add that there I saw thousands of Pines, Cedars, Firs, and other kindred families, growing from cuttings.† I supposed till then that all these genera had to be propagated from the seed, but there these future trees, from two to six inches high, were growing nicely in boxes of a sandy loam.

\* *Virgilia* is the name in all nursery catalogues, and in most of the botanical works to which reference is more commonly made. The *Bon Jardinier* has it *Cladrastis*, after RAFINESQUE. *Loulaton's Arboretum*, and *Michaux's Sylva*, the two great works on trees, do not mention *Cladrastis*. *Paston's Botanical Dictionary* enumerates six species of *Virgilia*, all evergreen shrubs, except the *lutea*: one a native of Abyssinia, the others of the Cape of Good Hope. These are greenhouse plants.—Ed.

† We think our correspondent must be mistaken in regard to Pines and Firs being propagated by thousands from cuttings, by the Messrs. PARSONS. It is not practicable to propagate either from cuttings on a scale of sufficient importance for a nurseryman, besides the plants so raised are of little value as compared to seedlings. Junipers, Cedars, Cypressess, Arbor Vitæ, &c., are grown successfully from cuttings.—Ed.

THE HOLLY TREE, (*Ilex opaca*).

BY HORTICOLA.

THE best trees, like the best people, are the rarest; possibly we attach more interest to the rare, both in trees and in the human species, by an unjust standard; yet in the former, the slowness of growth which adds to the value of the wood, and is apt to influence our estimate of beauty, is one cause of the scarcity of fine specimens among us. We are but young planters, and we want immediate effects. How then can we expect to find a large tree like the Holly, which requires no less than a century to bring it to perfection? It is rather a hopeless case, we confess, and yet we would fain advise every one who plants not to forget the Holly, the most beautiful of our native evergreens, its shape, color and form of leaves, and its ever ornamental berries considered.\* It is slow to germinate, slow to grow, and difficult to move from the spot where nature placed it; and yet there is no reason to despair, if you begin right. As a hedge it has no compeer, and he who first shows a fine Holly hedge of some extent in America will be entitled to the thanks of all posterity, as well as his cotemporaries.

The Holly, like *Magnolia glauca*, adapts itself to the soil in which it is placed. In New Jersey, near the sea coast it thrives admirably in dry sand; in Maryland, in gravelly soil; while in South Carolina, Georgia, and Lower Louisiana, it seeks shady places on the edges of swamps, where the soil is cool and fertile. In all these situations it is vigorous and enduring. The writer has lately seen, with extreme admiration, immense numbers near Absecon, in New Jersey, a new watering place of extraordinary capabilities, to which a railroad has just been opened from Philadelphia. Some of them are undoubtedly more than a century old, and growing close to the edge of the boundary of the sea; exposed to all the fury of the north-east winds, they have been blown into fantastic shapes at the tops, but have firmly resisted the awful storms which make that coast the dread of the mariner.

The difficulty of germinating the Holly seeds may be overcome with skill and knowledge; probably the recommendations in MICHAUX'S great work on American Trees are the best; but there are doubtless other methods, such as the use of hot water, and passing them through the stomachs of domestic birds, to rid them of their viscous covering, which would be efficacious. The writer has succeeded best where considerable moisture was regularly present. In one instance a large quantity was planted in the bed of a grapery, and in two years after only a few came up; these it was observed were under a drip of the glass, which was imperfect, and in no other spot did they vegetate—a fact suggestive and important.

\* In making some garden calls a few days ago at Astoria, in company with Mr. Hogg, we were shown a beautiful Holly tree, a perfect cone about eight or ten feet high, every way as fine as any of the size we have seen in England. It was standing in an open exposed situation, and appeared quite at home in it. The time for the Holly and other such slow growing trees has scarcely arrived yet in this country; planters have been impatient; Silver Maples, Pawlonias, Abies and Ailantus, have been more in demand. This arose from the necessity of having shade and shelter, in new places. The Holly is a luxury in ornamental gardens, and like other luxuries will be sought for only when necessities are satisfied. — Ed.

The mention of *Michaux's Sylva* reminds us to say that a new edition of that invaluable work has been called for by the public, and is just ready for issue. It is entirely indispensable to the student of arboriculture, and having the advantage of new American notes, it is becoming the *vade mecum* of all who plant. The newspapers herald the advent of a JENNY LIND or a GRISI, as evidence of our social advancement and liberality in the expenditure of money; they puff away at these and similar surface polishings in perfect ignorance of this great book, which is penetrating to our most distant settlements, and diffusing taste and information where GRISI and MARIO can never teach, and where its *results* will live for the admiration of future generations when the very names of "dear Jenny" and our present visitors will be forgotten.\*

We cannot but wish, sometimes, that our newspapers would devote a little corner to country affairs; we should so like our visitors from the great cities when they come to see us, to know a Willow from a Deodar, or even a Larch from a Pine; but no! they go on from generation to generation, in entire ignorance of what constitutes rustic beauty and ornament; they travel thousands of miles to get a peep at some landscape from a mountain height, the ingredients of which, its geological and arboricultural treasures they are entirely ignorant of. How much *more* pleasure would they enjoy, if they had instructed themselves to observe and admire the beauties of nature. We, as a people, know too little of Astronomy, of Geology, and of Botany; and we shall so continue till our teachers of youth know something themselves of these sciences. It is too amusing to see our city teachers with their scholars on a pic-nic in the country; they cannot tell the young and inquiring youths the name of a single tree, unless indeed, they find chestnuts, or acorns beneath them! This *must* be altered; no teacher should pass an examination at a Normal School, unless he can tell a Currant bush from a Magnolia, when neither have fruit or flower.

### THE LILIUM THOMPSONIANUM, (DR. THOMPSON'S LILY).

WE find a colored drawing and a description of this Lily in the *Flore des Serres*. It was discovered more than thirty years ago, by the celebrated Dr. WALLICH, or by collectors in his service, in the mountains of Gossain-Than, and Kamaon, and rediscovered a long time afterwards by Dr. ROYLE, at Mussoree. It bloomed for the first time in Europe in the greenhouses of Messrs. LODDIGES, in London, in 1844, and the specimen from which this drawing was made, in the Kew Gardens, in April, 1853. It was produced from seeds collected at Almora, 8000 feet above the sea level, by Messrs. THOMPSON & SETRACHEY. Dr. ROYLE placed it among Fritillaria, but

\* It is some evidence of our advance that expensive books like MICHAUX at twenty-four dollars, and NUTTALL'S three additional volumes at twenty-one, are taken off to remote States with the rapidity they are. Even at these seemingly high prices they could not be manufactured, and so superbly colored, but that the plates were obtained from Paris gratuitously by the liberality of the late WILLIAM MACLURE, for the benefit of his countrymen. By this he has done much for America; we will not stop to contrast his conduct with the much befuddled speculations of a \* \* \* \* and a \* \* \* \*, but we are proud to believe that there is a little aristocracy of readers of the Horticulturist, who estimate things by their right standards.





LILIUM THOMPSONIANUM.

PLANCHON asserts that it is neither more nor less than a Lily. It appears to have been found under two forms, one of which has rose-colored and the other violet-colored flowers; but Dr. WALLEN's notes on the two forms in a living state leave no doubt as to their specific identity. The culture is described as in a cold frame, or in pots in a cold greenhouse or orangery during winter. There is a strong probability of its resisting the climate of a great part of this country in the open air. Its distinct color and graceful habit claim attention.

## REMARKS ON THE VEGETABLE GARDEN.

BY WILLIAM CHORLTON, NEW BRIGHTON, STATEN ISLAND.

It is somewhat gratifying to find your amateur correspondents inquiring for more practical knowledge with regard to the more economical cropping, and better use of the vegetable garden. This subject has long been behind the march of improvement which has characterised some other parts of Horticulture, and it appears not a little singular, when we consider the utilitarian age we live in. While there has been an intense desire to ransack Europe for new Pears, &c., and some cultivators can boast of exhibiting on the same table, from two to three hundred (said to be) distinct varieties,—while the minds of many have been puzzled for a new idea, in the arrangement of a trim bouquet,—the vegetable garden has been left with no further notice or forecast than merely planting and sowing; little or no regard being paid to rotation of crops, or how they may be arranged so that one may succeed another, during the season, without half of the ground lying waste. Surely this is of sufficient importance to receive attention, particularly if we consider the pecuniary results. The Vegetable Garden is in itself a pleasing object, if well attended; but we must also look for more substantial gratification. The capital spent in this department should be returned, with interest, and the general health promoted, by the wholesome produce which it can be made to bring forth. Therefore, a few general remarks may not be out of place, and will be something toward answering the request of your correspondent in the August issue.

When a man is first domiciled in the wilderness, he very naturally looks around him for the best spot, the most advantageous position upon which to grow food, and in his then primitive state he is induced to go the readiest and least expensive way to work, which will, of course consist in roughly breaking the sod. He is satisfied with the greater or less produce, according to the natural fertility of the soil, without troubling himself about making the most of a small space, or how many crops he can get off the same piece in a season. But in more densely populated localities, where land has become high-priced and restricted in extent, and where the first settler's mode of action has reduced the perhaps never very fertile properties to a state of almost sterility, it becomes a matter of consequence for us to consider how we can make the most of what we have. There are some who still cling to the antiquated

notion that land must lie "fallow" part of the time in order to maintain its capabilities to produce, and that without this we labor in vain. Such a theory may do well enough for those who are contented with half a cropped garden, where the weeds are often the most prominent objects, but it will never satisfy the energetic observing mind of a good cultivator; nor can he be convinced that such a mode of procedure can be made to pay. That "fallowing" is of service under some circumstances, may be reasonably admitted, as the getting rid of the multitude of the seeds of weeds, and mellowing of the soil, by frequent plowings and harrowings after the first turning up; but in these days of progress we find that agricultural chemistry teaches us that by supplying the deficient elements, good drainage, proper rotation and judicious tillage, we may keep the same plot always occupied, or at least during the time when the temperature is high enough to forward vegetation. Now, if this be true, (and it would be no difficult matter to furnish the proof,) there is no occasion to have any part of the vegetable plot lying waste, except during the winter season, and even then a portion may be employed. But this is not to be accomplished without forethought, as each kind to be grown must be considered with reference to its time of duration, so that it may be known how far one will interfere with the other, or how soon the ground will be clear of the present to make room for the future crop.

If Peas are sown in rows six feet apart, Celery may be planted between each row; and before the latter require earthing up, the former will have perfected their crop, and may be removed. Spring Spinach and Turnips will answer between the rows of Peas, if sown early, and may precede the Celery. A crop of Ruta Baga may follow early Potatoes; or winter Turnips may succeed Potatoes which are second early. After a crop of Early Cabbages the last planting of Sweet Corn may be put in. Rows of early Lettuce, Radishes, and such like, if placed six or seven feet apart, will not interfere with Water Melons, as the Melons will be progressing and the Lettuce, &c. will be fit for the table before the vines meet. Cauliflowers, also, if planted in rows the same distance, will not interfere with Musk Melons. Squashes if sown among the earliest crops of Sweet Corn, will not be injured if the corn stalks be removed when the heads are past use. Winter Cabbage will do planted between the rows of late Potatoes. Beets for winter, or fall and winter Cauliflower, may re-occupy any vacant ground in the middle of July.

It is desirable that no fruit trees be planted where esculents are grown; but where this is unavoidable, the smaller kinds, as Gooseberries and Currants, may be put beneath the larger ones. Cucumbers, Gherkins, &c., will do in the shade, yet not so well as in an open exposure, but will fill up vacant spaces under trees, for the sake of economy. These are only a few examples, given to illustrate the method by which the whole of a Vegetable Garden may be kept well stocked through the season, and it will be readily seen how much further the subject might be pursued. To give more would only appear like an endeavor to establish something like mechanical rule, a thing that gardeners should in all cases avoid. Be ruled by circumstances, observation and foresight, and there is little occasion to fear failure.

Where unremitting cropping is practised, the different successions will require



attention as regards manure and trenching; but as a general thing, if proper rotation is practiced, several crops may be taken off the same piece with one application of the fertilizing material; and a well considered plan of action in advance will enable the operator so to arrange and prepare the various plots, that the fall (which is the best) or early spring manuring will suffice, without the necessity of having to litter over the garden during the summer season.

The rotation of crops, or growing different kinds in succession, is a practice that every person who is acquainted with cultivation, acknowledges to be essentially required. Although correct chemical analyses shows that all plants are composed of the same elements, with very slight differences, yet these minute variations are sufficient to act very powerfully; enough so to be in many cases a mystery. Agricultural chemists often give us truthful accounts of the integral parts of different plants, and we might infer that if the soil contains something like relative proportions of these materials, that success must be certain. This, it is true, is an index, by which we may in part be guided. We must, however, recollect that a living plant is somewhat of chemical laboratory, and it is not yet determined in what proportions the different parts as found in the structure, are taken up, or whether some of them are not manufactured by the plant itself from more simple elements. There is yet much need of investigation on this point, notwithstanding the great advancement that has been made of late years. In the mean time, it is well for us to leave all such weighty experiments to those who have time and opportunity to carry them out, and fall back upon established facts. It is well known that plants decompose carbonic acid by the leaves, and assimilate the carbon in their structure, and we may with propriety suggest that, as this gas is heavier than the atmosphere, those vegetables which have a great amount of succulent leaf and near the ground, are capable of absorbing a large quantity, and very likely more than they really require, consequently a portion of this may be given out by the roots, and remain as nutriment for future crops of a less absorbing character. After a very careful observation for many years, I am led to believe in this theory, and constantly make use of it in my own practice, with success. To make the matter more plain, a crop of Turnips or Beets may be succeeded by Peas, and Spinach by Corn, &c. It may be admitted that the manuring between crops, will in some cases appear to counteract this presumption, but I have always found the manure when so applied, to act more powerfully if the above kind of rotation has been observed.



## Foreign Notices.

*TORREYA MYRISTICA*, *Hooker in Bot. Mag. t. 4780*; *alias T. CALIFORNICA*, *Torrey in New York Journal Pharm.*—An excellent figure is here given of this fine evergreen coniferous tree, which has been raised by MESSRS. VILCH. It is said by Mr. W. LOBB to grow 30 to 40 feet high, in the elevated regions of Sierra Nevada of California. Its foliage resembles that of *Cephalotaxus Fortunei*. The seeds are as large as nutmegs, and have the same kind of albumen (called by botanists ruminated), whence they have gained the name of nutmegs in California. We find the following account of them in the last number of the "*Pharmaceutical Journal*:"

"About a year ago (says Prof. TORREY) I received from the late Mr. SHELTON, who had just returned from San Francisco, a specimen of what was called the California Nutmeg. I immediately considered it a species of ARNOTT's genus *Torreya*, belonging to the order Taxineæ of the great natural family of Conifere. It had been discovered but a year or two before Mr. SHELTON left the country, and had already attracted considerable attention, not only from the beauty of the tree, but from the singular character of the fruit and kernel, the latter strongly resembling the common nutmeg. Indeed, it has been frequently stated in letters from California that the Nutmeg is a native of that country. The foliage has the form and deep rich green of the Florida species, or *T. taxifolia*, as well as of the Yew; but the leaves are much larger, being from one and a half inch to two and a quarter inches long. They spread out on two sides, and are tipped with a sharp rigid point. The fruit, as it may be popularly called, is about the size and form of a *Greengage* Plum, and in the dried state has a pale olive color, but this may not be its natural tint. The outer covering is a thick, fleshy, nearly closed urceole, or dish, which completely invests the seed, and closely adheres to it, except near the summit. It is smooth and even, and soft to the touch. The seed is usually oblong, and greatly resembles a large Pecan Nut, but frequently it is more ovate. The shell is smooth, thin, and fragile. On each side, near the summit and just below the non-adhering portion of the dish, is a perforation, communicating with an interior canal, similar to what I described in *T. taxifolia*, and the use of which is still unknown. The kernel is conformed to the shell, and has the external and internal appearance of the Nutmeg. When cut transversely the resemblance is perfect. The seed, however, is wholly destitute of the delicate aromatic odor of the oriental spice, for it has the strong terebinthine character of the Conifere. Neither is the fleshy covering of any known use. It is more probable that, like the fleshy cupa-berry of the Yew, it is of a poisonous nature. Still the discovery of this tree is interesting to the botanist and to the horticulturist. But two other species are known besides. One of them (*T. nucifera* Sieb. and Zucc) is a native of Japan, and the other has only been found hitherto in Middle Florida, in very confined stations. The latter is erroneously stated by ZUCCARINI to have a seed as large as a Walnut, by which he undoubtedly means the *Juglans regia*, or Madeira-nut, as it is called in the United States. As an ornamental tree, the California Nutmeg deserves to be extensively cultivated. It must be hardy, as it grows on the mountains, where the winter is very severe. The enterprising Messrs. PARSONS & Co., of Flushing, sent out a person to California for the express purpose of collecting the ornamental and useful plants of that country, and among other varieties he obtained, last year, some ripe and fresh seeds of the California Nutmeg. These germinated freely, and, when I saw the young plants last October, they had a healthy appearance, and had attained a good size. I have lately heard, also, that Mr. LOBB, an English collector, who has been exploring California for several years past, has sent seeds of this tree to England."—*Gardeners' Chronicle*.

**THE NEW BOOTAN RHODODENDRONS.** The *London Florist* gives the following description of these new Rhododendrons, from Mr. E. G. HENDERSON :

*R. Nuttallii*.—This, the largest flowered Rhododendron known, has foliage handsomer than described in books on living plants now in this country; the flowers resembling those of the Lily, are much larger than the Sikkim Rhododendron *Dalhousie*. Color, white, with tint of rose-red, and yellow at the base within, and delightfully fragrant. It has been named in compliment to the veteran botanist and traveler, T. NUTTALL, Esq.

*R. Windsorii*.—This splendid colored garden Rhododendron, of a color even surpassing the *Rhododendron arboreum*, will be found invaluable, from its dwarf close growing habit and large truss.

*R. Camelliaeflorum*.—A very curious species, discovered in the valley of Lablung, also on the Bootan Alps; at the latter place growing at an elevation of 9,000 to 12,000 feet. In foliage it resembles *R. Maddenii*; 3 to 5 inches long. Corolla, sparingly scaly,  $1\frac{1}{2}$  inch across; of a very thick texture; pure white, with a faint rosy tinge; all the segments obtuse and entire; the flower strongly resembling that of a single Camellia, from which its name is derived; a very distinct flower from any other Rhododendron.

*R. Jenkinsi*.—This species, according to a specimen without flower or fruit, in the herbarium of Sir W. Hooker, was found by the late Mr. GRIFFITH, on the Khasya Hills. As a species, it is allied to *R. Maddenii*, of Dr. Hooker; and these, along with *R. sparsiflorum*, *R. camelliaeflorum*, *R. lucidum*, and *R. edaphyllum*, have a very peculiar aspect, all agreeing in their smooth lepidote leaves, and succulent texture. Mr. BOOTH supposed, from the examination of the buds, that *R. Jenkinsi* would have yellow flowers, the specimens having been collected in the month of December. It is named in honor of Major JENKINS, of the East India service. If, as is probable, this species has large yellow flowers, like *R. Maddenii*, it will be one of the most distinct exhibition plants in the tribe.

*R. longifolium*.—A magnificent foliaged plant, discovered in the forest of Bootan, on the slopes of the Oola Mountains, at an elevation of 6,500 to 7,500 feet above the sea-level; the leaves 12 to 18 inches long, 3 to 5 inches wide in the middle; at first, pubescent; at length, smooth, or nearly so; gradually narrowed downwards; obovate, lanceolate, silvery, and whitish beneath. To all appearance, nearly hardy in this climate.

*R. Kaysi*.—A hardy, distinct shrub, growing to the height of two or three feet, on the mountains of Bootan, at an elevation of 9,000 to 10,000 feet above the sea-level, on the summit and northern ridges of the Lablung, forming low thickets, accompanied by Gaultherias and Yews above the range of *R. Hookeri* and *R. Falconeri*; leaves two and a half to three inches long, about an inch wide; coriaceous, and smooth; beneath, as well as capsule, almost covered with brown circular resinous scales. Corymb, compounded of three or four branchlets, each containing five or six flowers. Corolla (judging from the withered remains only) tubular; the border five-lobed and reflexed; the segments ovate, obtuse. Rather aromatic, from the resinous scales with which the leaves are clad beneath. In its native hills it grew amidst snows two or three feet in depth. It is allied to Dr. Hooker's *R. nigatum*; the flowers, as in that species, axillary, or below the summit of the branch. A shrub very distinct in habit.

**POT CULTURE OF THE VERBENA.**—As the Verbena merits a place, and most justly, among popular florists' flowers, perhaps a few hints on its cultivation in pots may be acceptable to those who have not hitherto adopted that mode of culture. I know of no plant more useful or ornamental as a pot plant, for decorating the greenhouse during the summer season, when the proper inmates of that structure are enjoying the open air. If we take into consideration its graceful habit, the variety and brilliancy of its colors, which offer hues for every taste, and above all, the lengthened period it continues to produce its lovely blossoms, it is unrivalled and ought to be more generally grown in pots as specimens, more especially now that the numerous varieties are so much improved, both in form and color. The present season has been productive of some gems of the first class; and if the Verbena continues to be improved as it has been during these



few years past, I have no doubt that the time is not far distant when it will form one of the leading features at our floral exhibitions. I do not know if my system of propagating this favorite be new; but as it is simple, certain and expeditious, it may be as well to state how I proceed from the commencement. I fill shallow pans (such as are used for placing under flower pots) to within a quarter of an inch of the top with silver sand, and pour in water sufficient just to cover the sand. I then make the cuttings in the usual way, and push them into the wet sand; put the labels to them, and place them in a hot-bed frame where the heat ranges from 65° to 70°, always keeping the sand wet. The advantages to be realized by propagating the *Verbena* in this way are, that the cuttings never require to be shaded in the brightest sunshine, consequently the young plants are not drawn up long and lanky; the cuttings never stop growing from the time they are put in until they are ready to pot off, which is in about six or seven days, when they may be drawn out of the wet sand, with a bunch of roots, without injuring a single fibre. The best time to commence operations for growing specimen *Verbenas* in pots is February, or as soon as vegetation commences for the season. It is desirable to pot a few of the best autumn-struck plants for the sake of early bloom; but they never make such handsome specimens, nor continue so long in good health, as plants raised from cuttings in spring. As soon as the cuttings are well rooted, they should be potted into 3-inch pots, and placed in a gentle heat for a few days, until they are established in the pots; then top them, and harden them by degrees; never allow them to remain long in heat after they begin to grow, or they will form long naked stems. As soon as the pots are filled with roots, shift into 6-inch ones, and from these into 11-inch pots. During the growth of the plant, all shoots must be stopped in order to cause the plants to grow bushy; and never allow them to flower until the plant is properly formed, and has as many leading shoots as are wanted. The compost in which I grow the *Verbena* is, equal parts of turfy loam, leaf mold, and peat, with a little silver sand added, to keep the soil open. I water twice a week with liquid manure, and occasionally syringe over head with clean water to cleanse the foliage. If the saving of the seed is no object, all flowers ought to be cut off as soon as they begin to decay. I need scarcely add, that the grand secret in the successful culture of this, as well as of all plants, is efficient drainage; without this no plant will continue long in good health. If green-fly should attack your plants, fumigate with tobacco; for if the fly once gets a-head, the plants will never recover sufficiently to give satisfaction. Mildew is another enemy which must be looked after. As soon as it is perceived, dust the plants with a little sulphur, which will stop it from doing much mischief.—*Y.*, in *Gardeners' Chronicle*.

ON THE CULTIVATION OF CAPE HEATHS.—Having procured some nice bushy plants of the sorts intended to be grown, which had better be done early in the spring, and having prepared sufficient good fibry peat, by breaking it to pieces and mixing with it a liberal quantity of silver sand, and some lumps of charcoal or small pebbles, proceed to shift the plants from 3-inch to 5-inch pots, or from 5-inch to 7 or 8-inch pots, and so on, as the case may be, using the peat coarser for the large sizes than for the small ones, and employing clean, well-drained pots. Press the mold firmly round them; if the peat is light, it must be pressed till it is quite firm, or the plants will probably grow very freely for a time, and then suddenly die. When they are shifted, place them in a cold frame and keep them rather close and shady for a few days, but do not go to extremes either way. Gradually increase the air, and reduce the shading till in fine days the lights are left off entirely.

As the weather becomes warm, leave air on all night, and in hot June, July, and August days shade them in the middle of the day, and leave the lights off all night. Many of them would, no doubt, bloom; but if they are slow-growing kinds, and specimens are required, I would prefer stopping them all over as soon as they get into good growth. When they require it pass a strong band of matting or string round the pot, and with some fine matting draw the shoots regularly towards the edge of the pot, in order to allow the air to pass freely through them.—Any fine woolly growth they may make in the centre had better be cut out, for it only turns yellow and unsightly if allowed to remain. Some of the free flowering kinds may be allowed

to bloom, and all those of a straggling habit should be cut back directly after, while those of more dwarf habit may merely have the extreme points pinched off some of them as soon as they can be caught peeping through the flowers; others may be pinched back on the top only, to allow weak side shoots to acquire strength before the leading ones break. The plan of merely taking out the point as it peeps through the flowers will be found useful in regard to some of the late blooming kinds; for by the time the flowers fade, the plant will be found to have broken a crop of buds just behind them. Some of the earliest stopped plants will probably require another stopping by the middle of July, while others will be found breaking freely of their own accord. Those that require it had better be stopped; and as they grow, the shoots must be carefully regulated by drawing them out with fine matting, and perhaps a fine stick or two.—Some of the free growing kinds may be shifted again about the same time, if rapid progress is required; but as a rule I do not think it advisable to do so, for very quickly grown plants are mostly short-lived. I prefer placing the plants on inverted pots or pans, and in hot weather keeping the bottom of the pit moist, so as to maintain a healthy atmosphere round them. If

the plants are much exposed to the sun the front of the pot must be shaded, and any of them that do not shade the soil in the pot had better have a few pieces of crock placed on its surface.

In wet weather the lights should be kept over the plants, but they must either be propped up by pots at the corners, or tilted by placing a block or pot under one edge. Heaths will take a great deal of water if properly treated; for instance, if a plant is allowed to get quite dry and is then well watered, the pot being filled up two or three times, it will absorb more moisture than one that is watered a little every day, and the soil will keep sweeter; care must, however, be taken not to let them get so dry as to make their very delicate roots shrivel.

As the winter draws on, if there is no proper house for them, with a little care they will winter very well in pits;\* if by chance they should get frozen hard, if they are allowed to stand in the dark, they will take no harm; and if the weather should be damp and close, a few lumps of lime placed here and there between them will tend to keep them free from mildew, which, however, should be carefully watched for at all seasons, and as soon as it is perceived the parts must be dusted with black sulphur. By following the same course of treatment the next year



ERICA CAVENDISH.

some very nice specimen plants may be grown, and by persevering with them they will become noble plants, like the fine specimen represented by the accompanying woodcut.—*J. B., in Florist.*

\* It would not be safe to rely on cold pits in this country, in the north; for in order to avoid the consequences of severe frost, they would have to be totally excluded from the light for weeks at a time. The best place is a cold greenhouse, where heat can be applied if necessary.—*Ed. Hort.*

**DISA GRANDIFLORA.**—Among the many striking instances of horticultural skill, exhibited at the last meeting at Chiswick, nothing attracted more attention than a terrestrial Orchid, well known to amateurs under the title of *Disa grandiflora*. From among some grassy leaves this gorgeous plant sends up a stem bearing erect some three or four flowers, each as large as a lady's hand, and of the richest crimson, melting into yellow.

It occurs at the Cape of Good Hope, and in no other part of the world. In that colony its favorite haunt is Table Mountain, where, according to Dr. HARVEY, it is so common that every stream is literally bordered with it in March. Sir JOHN HERSCHEL tells us that the temperature of the situation where it occurs is *occasionally* as low as  $31\frac{1}{2}^{\circ}$ , and also occasionally as high as  $96\frac{1}{2}^{\circ}$ . It lives on the borders of pools of standing water, the drainage of the boggy slopes of the mountain, in which its roots are immersed. These are dry or nearly so in summer. But it is frequently involved in the dense mists of the clouds, which, even in the hottest months, often prevail for a week or fortnight at a time.

These facts, and his own observations, appear to have suggested to Mr. LEACH that skilful course of treatment which has led him to such entire success. How he proceeds we learn from a letter with which he has favored us :

"I would say that my success in growing it has, I think, resulted simply from treating it as a greenhouse plant, and not drying it off for rest, as is usually done with Cape bulbs. I have not yet been able to perceive that my plant has ever been perfectly at rest; leaves seem either to be lengthening or offsets coming up—it was this peculiarity which determined me upon continuing to give it water all the year round—moderately, of course, during winter, while the thermometer was ranging between  $35^{\circ}$  and  $45^{\circ}$ , and freely during the other parts of the year.

"I suspect that, in its native habitats, though long continued heat and drouth may cause all foliage to die down, the roots, nevertheless, in the ravines where I understand it grows, remain continually moist. With me, however, a change of habit seems to take place, and the offsets of last autumn and winter become the flowering plants, not of this, but of next year; while those now in flower will die down, leaving an abundance of plants, scarcely half grown, and followed soon afterward by fresh offsets.

"Rough fibrous peat is the soil I use, with a good portion of silver sand; good drainage, of course—and, from the results I have obtained, I see no reason why this very beautiful species should not be found in the greenhouses of every one disposed to bestow the same care upon it which he gives to his Geraniums, and such like plants."

In this belief we concur, provided always a master's eye is present, to insure the plant against that neglect or forgetfulness which kill more fine plants in a year than merely bad cultivation in a century.—*Gardeners' Chronicle*.

**JAPANESE APRICOT.**—We learn from the *Tuinbouw Flora* that the Dutch have succeeded in fruiting the Japanese Apricot, called by botanists *Prunus* (or *Ameriaca*) *Mume*. A colored figure in the same work gives so good an idea of the plant that, as an undoubtedly distinct species of hardy fruit tree, the time has arrived for bringing it into notice in this country.

The first account we have of this Eastern fruit is to be found in KÆMPFER, who calls it *Bai*, or *Ume*, and *Ume bos*. He calls it a wild spiny Plum with a large fruit, and adds that the fruits preserved in the lees of *sacki* or Japanese beer (*Cerevisia japonensis*), are exported to India and China. In 1835 SIEBOLD and ZUCCARINI, in their work on Japanese plants, entered into particulars. We give the substance of the statement made by these authors, who call the plant *Mume*, and give *Bai* as its Chinese name. "The *Mume* is found through all the empire of Japan, but thrives best in the northern parts, where it grows fifteen or twenty feet high, and much resembles an European Apricot tree. When wild or planted in hedgerows it is a close branching bush, from eight to twelve feet high. It is much cultivated for the sake of its flowers as well as its fruits. In good seasons the tree is in flower in the beginning of February, and is then used for decorating the altars and dwellings of the Japanese, as a symbol of the return of spring. In the wild plant the flowers are white; when cultivated they vary through every shade of rose and red, even becoming greenish or yellowish. Those most highly valued are the double sorts, which



are used for dwarfing as well as for planting in gardens. Several hundred such varieties were collected in the garden of the Prince of TSUKESIX. The fondness of the Japanese for dwarf trees is well known, and this *Mumé* is one of the plants most used for the purpose. In 1826, a dealer offered for sale a specimen in flower which was scarcely three inches high. This marvel of gardening was growing in a little red varnished box of three stages, like the drug-boxes which the Japanese carry at their belt. The upper stage was occupied by the little *Mumé*, the middle stage by a Spruce Fir equally small, and the lowest stage by a Bamboo not more than an inch and a half high. As for the fruits, they ripen in June; when quite ripe they are insipid, for which reason they are salted down when green, like Cucumbers, and are eaten as a vegetable with rice and fish. Much, however, as they are esteemed by the Japanese, Europeans do not relish their sour bitter taste. They are usually colored red, when salted, by adding the leaves of *Ocimum crispum* (a kind of curled Basil.) The juice of the green fruit is taken as a refreshing beverage in fevers; and is regarded as indispensable to the preparation of the beautiful and delicate red dye prepared from the Safflower."

It will be seen from this account that we must not reckon the Japanese Apricot as a dessert fruit, unless in the form of a preparation like that of the Olive, for which it seems to be a Japanese substitute. We would therefore guard our readers against being seduced into the purchase of it by a fine-sounding name. From the figure in the *Tainbou Flora*, the fruit would seem to have much resemblance to the little early Apricots which the French call *Alberges*—pale straw-color, with a little salmon-red on one side and near the stem. But, although no hope can be entertained of its becoming of any value at table, it is very possible that it may become valuable as a stock for the cultivated Apricot. The climate from which it comes is very severe, and it is certainly a true Apricot. Therefore we have undoubted hardness on the one hand, and a great constitutional similarity on the other. In the latter respect, it ought to be much better suited to the Apricot than the Plum stock—which is apt to disagree with its Apricot scion—or than the Apricot itself, which is too tender to be buried underground in our wet and cold winters. As soon as the *Mumé* becomes cheap enough to be so employed, we would recommend it to the notice of the nurserymen. In the meanwhile let us guard the public against imagining that, because it is really an Apricot, it is therefore worth growing for dessert. Such value in horticulture as it possesses, beyond what is now suggested, is wholly confined to its effect as a tree that blossoms at the same time as the Almond.—*Gardeners' Chronicle*.

THE RICE-PAPER PLANT.—On the morning of the 20th of April last, the steamer in which I was a passenger dropped her anchor a little way up one of the rivers on the north-east part of Formosa. As this was my first visit to this fine island, and as I knew we had only a short time to stay, I lost no time in going on shore. Before leaving the vessel I had been examining with a spy-glass some large white flowers which grew on the banks and on the hill sides, and I now went in that direction, in order to ascertain what they were. When I reached the spot where they were growing, they proved to be very fine specimens of *Lilium japonicum*—the largest and most vigorous I had ever seen. As I was admiring these beautiful Lilies, which were growing as wild as the Primroses in our woods in England, another plant of far more interest caught my eye. This was nothing less than the Rice-paper Plant—the species which produces the far-famed Rice-paper of China, named by Sir W. HOOKER *Aralia papyrifera*. It was growing apparently wild; but the site may have been an old plantation, which was now overgrown with weeds and brushwood. The largest specimens which came under my notice were about five or six feet in height, and from six to three inches in circumference at the base, but nearly of an equal thickness all up the stem. The stems, usually bare all the way up, were crowned at the top with a number of noble looking palmate leaves, on long foot-stalks, which gave to the plant a very ornamental appearance. The under side of each leaf, its foot-stalk, and the top part of the stem, which was clasped by these stalks, was densely covered with down of a rich brown color, which readily came off upon any substance with which it came in contact. I did not meet with any plant in flower during my rambles, but it is probable the plant flowers at a later period of the year. Numerous small plants were coming through the ground in various directions, which a

Chinese soldier carefully dug up for me, and which are now safely deposited in Mr. BEALE'S garden at Shanghai. These, with a few samples of the largest stems I could find, will be sent to England in the course of a few months; the latter will prove an interesting addition to our museums of vegetable productions. The proportion of pith in these stems is very great, particularly near the top of vigorous growing ones, and it is from this pure white substance that the beautiful article erroneously called "Rice-paper" is prepared.

The Chinese call this plant the *Tung-tsaou*. What it was, or to what part of the vegetable kingdom it belonged, was long a mystery to botanists, who were oftentimes sadly misled by imaginary Chinese drawings, as some of those which have been published will clearly show, now that our knowledge has increased. Indeed the only drawing I have seen in Europe, which has any claim to be considered authentic, is that brought from China by Mr. REEVES many years ago, and which I have seen in the library of the Horticultural Society of London.

The *Tung-tsaou* is largely cultivated in many parts of the island of Formosa, and with rice and camphor forms one of the chief articles of export. Mr. BOWRING, who read a paper upon the Rice-paper Plant, before the China Branch of the Royal Asiatic Society, informs us that the Canton and Fokien provinces are the chief consumers, and that the town of Foo-chow alone is supposed to take annually not less than \$30,000 worth of this curious production. The cheapness of this paper in the Chinese market, as Mr. BOWRING justly remarks, is evidence of the abundance of the plant in its place of growth, and more especially of the cheapness of labor. "That 100 sheets of this material (each about three inches square), certainly one of the most beautiful and delicate substances with which we are acquainted, should be procurable for the small sum of 1½d. or 1¼d., is truly astonishing; and when once the attention of foreigners is directed to it, it will doubtless be in considerable request among workers in artificial flowers in Europe and America, being admirably adapted to their wants."\* The larger sheets, such as those used by the Canton flower-painters, are sold for about 1½d. each.

If the *Tung-tsaou* proves hardy in England, its fine foliage will render it a favorite among ornamental plants in our gardens. Judging, however, from its appearance when growing on its native island, and from the temperature of Formosa, I fear we cannot expect it to be more than a greenhouse plant with us. Plants of it are already in the Royal Garden at Kew, and the point will soon be set at rest by actual experience.—R. F., in *Gardeners' Chronicle*.

**IMPORTANCE OF THE ONION.**—The onion is worthy of notice as an extensive article of consumption in this country. It is largely cultivated at home, and is imported, to the extent of seven or eight hundred tons a year, from Spain and Portugal. But it rises in importance when we consider that in these latter countries it forms one of the common and universal supports of life. It is interesting, therefore, to know that, in addition to the peculiar flavor which first recommends it, the onion is remarkably nutritious. According to my analyses, the dried onion root contains from twenty-five to thirty per cent of gluten. It ranks in this respect with the nutritious pea and the gram of the east. It is not merely as a relish, therefore, that the way-faring Spaniard eats his onion with his humble crust of bread, as he sits by the refreshing spring; it is because experience has long proved that, like the cheese of the English laborer, it helps to sustain his strength also, and adds, beyond what its bulk would suggest, to the amount of nourishment which his simple meal supplies.—*The Chemistry of Life*.

**WATER SUPPLY TO HOUSES IN ANCIENT ROME.**—The water from the aqueducts was finally received into huge reservoirs, one for public use in supplying the fountains, and one for private use in supplying the dwellings. When a supply was granted to a private individual, a branch pipe was inserted in the main; from this it was distributed to the leaden cisterns common to every house, and the supply was measured by a bronze tube termed calix, and which was stamped like an imperial measure; this calix was in the time of AUGUSTUS constructed of lead; but the fashion was put a stop to when it was discovered that the water officers used to cheat the inhabitants by compressing the pipe.—*Builder*.

\* "Proceedings of the China Branch of the Royal Asiatic Society."

## Editor's Table.

MEETING OF THE NATIONAL POMOLOGICAL SOCIETY AT BOSTON.—We are unable to give at present more than a rough sketch of the proceedings; as soon as the official report comes from the press, we will endeavor to lay the more important parts of it before our readers.

Pursuant to notice, the session opened on the 13th inst., at half past 10 o'clock. President WILDER in the Chair. The attendance was fair, but less numerous than we expected. The dry season had some effect in keeping people away, as a large and general display of fruits was not expected. There were respectable delegations from New York, New Jersey, Pennsylvania, Maine, New Hampshire, and Vermont; one from Ohio, one from Illinois, one from Iowa, and one from Georgia. Names will be given hereafter.

The President's address was the first business in order, and an excellent, practical address it was. The principal topics discussed in it were—1st, Raising Fruits from Seed; 2d, The Arts of Cultivation; 3d, The Preservation and Ripening of Fruits. We regret not being able to present at least a portion of it this month.

The next business in order was the selection of officers for the ensuing year. A committee of one from some five or seven States was appointed, and the officers of last year were re-nominated and elected unanimously:

MARSHALL P. WILDER, *President*. One *Vice President* from each State. H. W. S. CLEVELAND, *Secretary*. THOS. P. JAMES, *Treasurer*.

A committee was appointed to prepare an order of business, and reported the following: First, Discussion of the Pear, in the following order:

1. *Rejection of worthless sorts.*
2. *Adoption of sorts for general culture.*
3. *Adoption of sorts that promise well.*
4. *Sorts for culture on Quince stock.*

When these subjects are closed, the Apple, Plum, Cherry, and other fruits to be taken up.

DISCUSSION ON FRUITS.—On the list of Pears proposed for rejection were the following sorts, which were retained at the suggestion of Mr. HOVEY:

*Beurre Adam, Dumortier of Manning, Duchesse Damas, Figue de Naples, Flemish Bon-chretien, Hacon's Incomparable, March Bergamot, Knight's Monarch, and Styrian.*

The list previously recommended for trial as "promising well" was then taken up, and the only variety on it deemed worthy of promotion to the list "for general cultivation" was the *Manning's Elizabeth*—very highly commended by nearly all who have tested it. *Brandt's St. Germain* and *Diller* were stricken off the list as unworthy, and the others, after discussion, were allowed to remain. The names of *Van Assene* and *Duchesse d'Orleans* were changed to *Van Assche* and *Beurre St. Nicholas*, being the original names.

The following varieties were discussed and admitted to the trial list as "promising well":

*Beurre Clairgeau, Sheldon, Collins, Adams, Howell, Beurre Superfin, Lawrence, Belle Epine Damas, and Walker.*



The President was requested to name a few of the more promising new varieties, and gave the following:

*Pius IX, Rousselet d'Esperin, Beurre Sterckman, Chas. Van Hoogten, Comte de Flanders, and Theodore Van Mons.*

Mr. MANNING added *Fondante de Maline*.

The *Easter Beurre* was introduced and discussed at considerable length. Many had succeeded well with it, and others could not ripen it. It sells in the Boston market at \$3 to \$6 per dozen. We shall quote the discussion on it hereafter.

The *Fondante de Noel*, known as "Belle Apres Noel," was well spoken of. *Fondante de Noel* was suggested by Mr. BERCKMAN as the original and correct name, and was so agreed to.

*Apples*.—We were absent during a considerable part of the discussion on Apples. The *Melon* and *Hawley* were, we believe, recommended for general cultivation, the *Benoni* for trial, and the *Ladies' Sweet* was passed as one of the best winter sweet varieties. Several others were discussed and passed by as not being sufficiently known.

*Cherries*.—The following varieties were adopted as promising well:

*Belle d'Orleans, Gov. Wood, Black Hawk, Great Bigarreau, Coc's Transparent, Kirtland's Mary, Hovey, WALSH's seedling, known and disseminated by Hovey as the New Black Bigarreau.*

*Strawberries*.—The discussion was very unsatisfactory. There seemed to be an astonishing difference of opinion in regard to the merits of sorts. *Burr's New Pine* and *Jenny's Seedling* were recommended for "certain localities."

*Plums*.—The following were recommended for general cultivation:—*McLaughlin, Smith's Orleans, and Reine Claude de Buray*: and as promising well, *Washington Seedling* and *Monroe*.

*Raspberries*.—*Knevet's Giant* was adopted for general cultivation, and the *Orange* and the *French* as promising well.

*Blackberries*.—The *New Rochelle* was highly spoken of by those who knew it. The *Needham White* variety generally regarded as worthless.

No action taken upon Apricots or Nectarines we believe.

*Grapes*.—The *Diana* was recommended for general cultivation. The *Concord* was discussed, but nothing more done in relation to it than to adopt the report of the committee on seedling fruits. That report will appear hereafter, and we shall also have a word to say of this variety.

We found it impossible, in consequence of frequent interruptions, to carry out our intention of making a complete report of the decisions on fruits, but as soon as the official report appears we shall correct all errors and make up all deficiencies. We know that many will be desirous of learning as soon as possible what the decisions of the Society were on certain varieties, and we therefore give an imperfect sketch without delay.

*Pears on Quince Stock*.—This part of the business was taken up towards the close and the following twenty-two varieties were unanimously agreed to as worthy of being recommended for general cultivation on that stock:

*Duchesse d'Angouleme, Rostaezer, Beurre d'Anjou, Beurre Diez, White Doyenne, Louise Bonne de Jersey, Vicar of Winkfield, Glout Morceau, Fig, Beurre Langelier, Easter Beurre, Pound or Ucedule's St. Germain, Cuttillac, Beurre d'Amaulis, Long Green, Nouveau Poiteau, Soldat Laborer, Urbaniste, Napoleon, Buffam, St. Michael Archangel, Triomphe de Jodoigne,*

The proceedings throughout were characterized by the utmost caution, carried even to

the extreme, as we think, in many cases, in regard to recommending fruits. This will be readily seen from the small number agreed to for general culture, and also from some varieties previously recommended having been stricken entirely off the lists. This will doubtless commend such decisions as have been made to the confidence of the public. The delegates from abroad go home well pleased—delighted with the hospitality and kindness of the Boston horticulturists, and greatly instructed and encouraged by their skill, enterprise and enthusiasm.

The exhibition of the Society was grand. A great oval tent on the common, 200 feet long and 100 feet wide, filled with the finest fruits and flowers. A table through the center was occupied with flowers and plants. On either side of this were two tables laden with fruits, and around the side a table for cut flowers, vegetables, &c. In the evening it was brilliantly lighted with gas, and a band of music played at intervals and gave the scene additional zest. The competition for the premium for the best thirty varieties of Pears, twelve specimens of each, brought out a fine display, on each of the four tables there was a collection of thirty varieties from Messrs. WILDER, WALKER, CABOT and HOVEY.

The President of the Society, as well as the Committees and members, were unceasing in their attentions to the delegates from abroad, and when we say we never spent three more agreeable days than we did among the Boston gentlemen, we only repeat the unanimous expression of all those from this and other States.

President WILDER gave a magnificent "pomological levee" at the Revere House. More than two hundred were present, we should think, including the Governor of the State, the Mayor of Boston and many of the most eminent gentlemen of Massachusetts and other States. The table was the richest and most tasteful we have ever seen, and this was the expression of many who have attended the most brilliant affairs of this kind ever given in Boston. Fruits and American wines were most bounteously supplied, as were all other articles necessary to a most sumptuous and elegant entertainment. The occasion was free from formalities—all seemed happy in greeting old acquaintances and forming new ones. Sentiments appropriate to the time were given and responded to in brief off-hand speeches. The universal remark was, that what Mr. WILDER does, he not only does well but *better than any one else*. To this we cordially assent.

In two years from this time the Society is to meet at Rochester, and the North-West Pomological Society is invited to meet it there. We hope and believe that this general assemblage from the east and west will be no less pleasant or profitable than any we have yet seen. The time is distant and great changes may take place ere then, but we shall look forward to it with pleasure nevertheless.

We have made note of much that we saw in our calls around Boston and elsewhere, but our mention of them must be brief for the present.

CALLS AROUND BOSTON.—Being closely occupied with the proceedings of the Pomological Society during our brief stay at Boston, we were compelled to deny ourselves the pleasure we had anticipated, in visiting many of the beautiful gardens of that city and its environs. The Society adjourned on Friday, at 2 o'clock, and we only had that afternoon and the forenoon of Saturday, to make our calls; consequently they are few and brief.

*Residence of Marshall P. Wilder, Esq., at Dorchester.*—To a person interested in Horticulture and Pomology, we know of no place in America that offers so many attractions. The collection of bearing fruit trees, (Pears especially,) is unequalled. A week would not be too much to examine them satisfactorily. The trees are all vigorous and productive,

showing that they are supplied with their appropriate food. The soil is rather light and gravelly, and would only produce such growth as we see on it, under the best management. Among new Pears of which we noticed very beautiful trees, were *Conseiller Ranwez*, *Walker*, *Theodore Van Mons*, *Nouveau Poiteau*, *Dallas*, *Stirling*, and *Charles Van Hoogten*. We observed a fine tree of *Kirtland's Mammoth Cherry* with leaves surpassing in size and luxuriance those of any Cherry tree we have ever seen. If the fruit is proportionably large it is well named.

The collection of exotic plants is large, and embraces most of the new, rare, and very fine plants. A specimen of the *Cissus discolor*, (the most beautiful of all variegated-leaved plants) on Mr. WILDER's table, among his fruit in the Society's tent, was the "observed of all observers." Standing in the midst of the magnificent dishes of Pears, it very happily represented the blending of the useful and beautiful. In the conservatory we were shown a fine flowering specimen of the rare yellow *Bignonia Chamberlinii*. The collection of Camellias is immense, and embraces a very large number of seedlings. *Wilderii* and *Abby Wilder*, are now well known as among the very finest varieties in cultivation. From so many promising seedlings, others of equal, or even greater merit may reasonably be expected. The plant-houses, graperies, &c., are all complete and elegant.

The lawn and ornamental grounds around the mansion, are tastefully arranged and kept in the best possible condition. Refreshing rains had fallen previous to our visit, and the new growth of grass was green and fresh as it could be in the month of May. Mr. WILDER is a farmer as well as a horticulturist. We were shown a pen of beautiful Suffolk pigs, and some fine Durham cows. It is no more than right that the President of the National Agricultural Society should have some fine stock.

*Graperies of W. C. Strong, Esq., Newton.*—The most extensive culture of Grapes under glass which we have had an opportunity of seeing in this country, is that of Mr. STRONG. He has three houses, each upwards of 200 feet long. One is a forcing-house, and the crop was cut; but in two of them there was a full crop on the vines, all remarkably well-grown, well-colored, and fine. We think Mr. STRONG told us that he would send some 3000 lbs. to market this season. The early crop from the forcing house usually sells at \$2 per lb., and the autumn crop at fifty to seventy-five cents. If the culture of Grapes under glass for market can be made profitable, we think Mr. STRONG will make it so. His houses are plain and inexpensive, but well adapted to the purpose. The roofs are curved; and each of the cold-houses has a brick flue, which can be used in spring to keep out late frosts, and in fall to ripen off late varieties.

Mr. STRONG made a superb display on the tables of the Horticultural Society. Among his collection we noticed fine large bunches of *Muscat of Alexandria*, *Cannon Hall Muscat*, and *Damascus*, a very large, distinct, oval, purple Grape. Three feet of a *Hamburg* vine was shown with fourteen large bunches on it.

Mr. STRONG's residence is on an elevated situation, adjoining the ground formerly occupied by WM. KENRICK's nurseries, commanding a fine view of the environs of Boston. His grounds are extensive and susceptible of great improvement. Land in the vicinity is highly valued for suburban residences. At the base of the hill occupied by Mr. STRONG, we find the residence of his father-in-law, JOSEPH BRECK, Esq., author of the "*The Book of Flowers*," whose name has been associated with Agriculture and Horticulture, as long as we can remember. His establishment here consists of a garden of three acres, two graperies and a plant-house. The garden is tastefully laid out, and mostly occupied with annuals, herbaceous perennial plants, Roses, and the finer shrubs; to all of which Mr. BRECK devotes special attention. His houses are complete, and even elegant, both in design and



finish. His graperies contain a great number of varieties, and all were bearing a fine crop. The hour of our visit was too late in the evening to allow us more than a glance at them.

Mr. BUECK and his son carry on an extensive seed business in town, and this suburban retreat affords them pleasant and profitable employment, and recreation during their morning and evening hours. Business of the day falls with comparative lightness on men who enjoy such privileges; the more so when they possess habits and tastes capable of appreciating them.

*Messrs. Hovey & Co.'s Nurseries.*—This is one of the most enterprising and prosperous establishments of the kind in America. The nurseries are remarkable for the great number of specimen fruit trees, (Pears especially), which they contain; the numerous walks which intersect the ground, are so many avenues of Pear trees, in great variety. To the fruit-grower and pomologist they offer a wide and interesting field of study. The trees are mostly conducted in pyramid form. *Sean's Orange, Lawrence, Urbaniste, Vicar of Winkfield, Beurre Langelier, and Boston*, we noted as among the most vigorous and well-formed trees. The heaviest crop was on the *Louise Bonne de Jersey*.

The plant-houses are extensive, and conducted with great spirit. The newest and finest plants may be found in the collection. We were shown, among other rare plants, a large specimen of the *Lilium giganteum*, which will soon flower, a fine specimen of *Medenilla magnifica*, and many other attractive novelties. A bed of exquisitely beautiful Pansies near the conservatory was one of the most admired objects at the time of our visit. It is a great rarity to see so fine a display of them at that season, and especially after so dry a summer.

The ground occupied by these nurseries will soon be too valuable for such purposes. It is already closely surrounded by elegant and costly residences. The neighborhood is one of the most attractive in the vicinity of Boston.

*VISITS.—Pinney's Orchard at Brockport.*—We made Mr. PINNEY a hurried call on the first of August, and looked through his fine orchards of Peaches and dwarf Pears. His trees all looked well, considering the long drouth they had suffered. His *Early York* Peaches were gone, and he was just beginning to pick *Crawford's Early*, of which the crop is very heavy. This and the *Early York* are the two most certain and abundant bearers he has in his very large collection. He had a crop of *Fay's Early Ann*, but they are small, and not much earlier than *Early York*. His orchard of dwarf Pears looked remarkably well; the trees made vigorous growth; and the *Louise Bonne* and *Virgalieu*, showed some fine specimens. The trees have been but three years planted, we believe, and show well for a crop next season. Those who talk of dwarf Pears not doing well, should see Mr. PINNEY's trees. We think we observed only two cases of blight in the entire orchard.

*Garden of H. P. Norton, Esq.*—No one can look through Mr. NORTON's garden without being surprised at the quantity of interesting and useful material he has assembled in such a small compass. In the rear are several very large Apple trees. On one were fine specimens of *Hawley* and *Early Joe*; there had been *Red Astracan* too, but they were gone. A couple of trees of *Greenings* were like little mountains of foliage and fruit—no trace of a trunk was to be seen; and if there be any, they never see daylight, during the summer season at least. Nearer the house we saw beautiful dwarf Pears, loaded with fruit, besides a melange of flowers—Roses, Petunias, Verbenas, annuals, and such things as are best calculated to keep up a continual gaiety. The dry weather which had prevailed for two long months before our visit, made everything appear to disadvantage, but we were able to see

that people who have taste can accomplish much on a very small piece of ground, and at small expense. Mr. NORTON lost, last season and this, two of his finest Pear trees by blight—a *Glout Morceau* and *Summer Francreal*—the best specimens perhaps in America. A great loss to a small collection.

**A COMPLETE SUBURBAN RESIDENCE.**—One of the most complete, tastefully-arranged, and well-kept suburban residences in the fashionable quarter of our city, (East Avenue), is that of SELAH MATHEWS, Esq. The front lawn is spacious in proportion to the extent of the grounds, and is kept closely cut and smooth as a piece of velvet. The fruit and kitchen garden in the rear of the dwelling show good culture. On each side of the main walk there is a row of fine dwarf Pears in full bearing. The trees of *Louise Bonne de Jersey* and *Dutchess d'Angouleme* are models of beauty and productiveness combined. They are grown as low standards with pyramidal heads. A snug little vinery, about twenty-five feet long, and bearing a fine crop of fruit, gives a finish to this department; and we understand another to be heated, and to include pits for forcing early vegetables, is about to be erected. Barns and other out-buildings, servants dwellings, &c., all exhibit taste and judgment in the arrangement, and complete the picture of a very comfortable establishment. We have others to speak of by-and-by.

**BRITISH POMOLOGICAL SOCIETY.**—A society under this name was organized in London, on the 10th of July last. Our friend THOS. RIVERS, Esq., presided on the occasion. Its name and purposes are announced as follows:

- "1. That a Society shall be established, to be called the British Pomological Society.
- "2. That the Society shall have for its object the promotion generally of Fruit Culture in the British dominions. That it shall especially direct attention to the production of new varieties of Fruit, examining and reporting on their merits, and endeavoring to classify the Fruits of Great Britain, the European continent, and America."

A pretty wide field that, friend RIVERS. You sometimes accuse us on this side the water of being somewhat extravagant in our enterprizes, but we have never ventured on any thing like this. "*Great Britain, the European continent, and America*"! Go ahead.

**CORRECTION.**—We insert the following note as the best means of correcting the error alluded to:

"You will oblige me by making a few corrections and additions to my notice of the *Stanwick* Nectarine. Your separating it from my account of the *Nelumbium*, and omitting a few other sentences, makes it appear that the term "here" applies to our own place, thereby doing an injustice to Mr. COPE's present gardener, to whom all the credit and honor of its successful culture is alone due. I may add, that since my notice of it, Mr. COPE informs me that the fruit has ripened, and "surpasses even expectation" in the richness of its flavor—approaching more nearly the taste of a Peach than that usual to a Nectarine. Though ripe before the exhibition, and the fruit had to be preserved some days in ice, in order to be saved for it, our fruit committee thought it worthy of a special premium. THOMAS MEEHAN.

**THE CHENANGO STRAWBERRY APPLE.**—Under this name we have received specimens of a large, oblong, handsome, striped Apple, of very good quality, from Mr. W. COLLINS, Jr., Smyrna, N. Y. He says the tree is a vigorous, upright grower, and a great bearer. We have found the same Apple at Brockport, in this county, under the name of *Strawberry* Apple; but we have not been able to trace its origin. It is well worthy of cultivation.



THE North Western Pomological Society has postponed its next meeting as will be seen by the following circular.

BURLINGTON, IOWA, SEPT. 7TH, 1854.

"In consequence of the severe and protracted drouth which has prevailed the present season throughout the fruit-bearing region of the North-west, and the consequent nearly total failure of fruits of every description, the undersigned Committee of Arrangements of the North Western Fruit Growers Association, appointed at the meeting of 1853, deem it best to postpone entirely the session of 1854, which was to have been held at this place, until the season of 1855.

They have been especially induced to pursue this course, presuming that the principal object of the meeting of the Association west of the Mississippi River is to inspect and test the fruits of this region. The failure of our fruit crop being (in common with our neighboring States) nearly complete, in consequence of drouth, the disappointment to visitors from abroad would not be less than the mortification of Western Fruit Growers at their inability to make a display worthy the attention of the Association."

HENRY AVERY, ABNER LEONARD, G. C. NEALLEY,  
*Comm. of Arrangements N. W. Fruit Growers Association.*

SOULARD'S BERGAMOT PEAR.—Under this name we have received from JAS. G. SOULARD, Esq., of Galena, Ill., specimens of Pears, supposed to be a seedling fruit, and if so, originated some fifty years ago in his father's garden, now in the city of St. Louis. Mr. S. describes the tree as erect and a fair grower, with stout, rigid shoots. It bears in a reasonable time, and becomes very prolific. The fruit is round, like an Apple, with a short, stout stalk, about medium size, or rather below; of a greenish color; melting and juicy. Mr. SOULARD says: "In quality, in my opinion, it yields the palm to none; for though less sugary than the *Seckel*, it is preferred by many for its greater sprightliness, and higher, finer aroma." We cannot speak of the quality, as the specimens were damaged on the journey; but we think it a fine Pear, and we shall test it here as soon as possible.

PEARS.—We are indebted to CHAS. DOWNING, Esq., for fine specimens of the *Ananas d'Ete* and *Shenk* Pears, August 30. The latter are just ripe, and are *very good*, but in every one we have seen there are knots and cracks. Mr. DOWNING's specimens were raised on the Quince, and were as large and fine as any we have seen from Pennsylvania, and of better quality. Specimens grown in our own grounds have not been either so large, fair, or good, as those from Newburgh. Mr. DOWNING thinks it will not prove worthy of general or extensive culture. The *Ananas d'Ete* is a very fine fruit.

ISABELLA GRAPES.—We have received from E. A. MCKAY, of Naples, a box of *Isabella* Grapes from his vineyard—the largest and most perfectly ripened we have seen this season, and as fine as we have ever seen. Part of them were gathered September 6th, part on the 12th, and about half the entire crop was ripe on the 21st. Mr. MCKAY has promised some more "facts" respecting his mode of culture. His last statement attracted some attention, and is not forgotten.

It is estimated that the Grape crop of Ohio and Pierce Townships, in Clermont county, Ohio, reaches between fifty and sixty thousand dollars annually. Last year is the only one which proved entirely successful in the culture of the Grape; but the prospects are quite fair for the present season. Mr. WEIR, the largest Grape-grower in the vicinity of New Richmond, says that he made thirty-three hundred gallons of the juice in 1853.



CUBA.—We have an eye to this paradise of an island, and make the following interesting extracts from a new work published in Boston, written by MATURIN M. BALLOU, entitled "*History of Cuba, or Notes of a Traveler in the tropics*," one of the most reliable and agreeable books of the kind we have ever met with. It is full of information, and though we regret that the writer has no botanical or scientific knowledge, his descriptions of the climate and vegetation are graphic and pleasing. He has a fine eye for the beauties of nature:

A COFFEE PLANTATION.—The Coffee plant requires some shade, and hence the plantations are diversified by alternate rows of Bananas and other useful and ornamental tropical shrubs and plants. It is one of the most beautiful gardens that can well be conceived, in its variety and beauty baffling correct description, being one of those peculiar characteristics of the low latitudes which must be seen to be understood. An estate devoted to this purpose usually covers some 300 acres of land, planted in regular squares of eight acres, and intersected by broad alleys of Palms, Oranges, &c., &c. Mingled with these are planted Lemons, Pomegranates, Cape Jasmins, and a species of wild Heliotrope, fragrant as the morning. Conceive of this beautiful arrangement and then of the whole when in flower; the Coffee with its milk-white blossoms, so abundant that it seems as though a pure white cloud of snow had fallen there and left the rest of the vegetation fresh and green. Interspersed in these fragrant alleys is the red of the Mexican Rose, the flowering Pomegranate, and the large gaudy flower of the Penon shrouding its parent stem in a cloak of scarlet, with wavings here and there of the graceful yellow flag, and many bewitchingly fragrant wild flowers, twining their tender stems about the base of these. In short, a Coffee plantation is a perfect floral el dorado, with every luxury (except ice) the heart could wish.

RANK.—"The Sugar-planter, the Coffee-planter, the merchant, the liberal professions and the literati (this last a meagre class in numbers), stand about in the order in which we have written them, as regards their relative degrees of social position, but wealth has the same charm here as in every part of christendom.

PRODUCTIONS.—"The agriculturists confine their attention almost solely to the raising of Sugar, Coffee and Tobacco, almost entirely neglecting Indian Corn, and but slightly attending to the varieties of the Orange. It is scarcely credible that, when the generous soil produces from two to three crops annually, the vegetable wealth of this island should be so poorly developed. It is capable of supporting a population of almost any density, and yet the largest estimate gives only a million and a half of inhabitants. On treading the fertile soil, and on beholding the clustering fruits offered on all sides, the delicious Oranges, the perfumed Pine Apples, the luscious Bananas, the cooling Cocoa Nuts, and other fruits for which our language has no name, we are struck with the thought of how much Providence, and how little man, has done for this Eden of the Gulf. We long to see it peopled by men who can appreciate the gifts of nature, men who are willing to do their part in reward for her bounty, men who will meet her half way and second her spontaneous efforts. Nowhere on the face of the globe would intelligent labor meet with a richer reward—nowhere on the face of the globe would repose from labor be so sweet. The hour of rest sinks upon the face of nature with a peculiar charm; the night breeze comes with its gentle breeze to fan the weary frame, and no danger lurks in its career."

There are many reasons why we should be glad to see our enterprising citizens in possession (peaceable) of this glorious island besides political ones. The horticultural points of interest are great indeed; what glorious cargoes would we export to our American cities! We heard a smoker give his reasons the other day, as he puffed a fine Havana, thus:—"Why, yes, we must have it; cigars are too dear!"

Our author says that superior Pine Apples are sold in the markets at one cent a piece! The most singular of the fruits is the Rose Apple, which, when eaten, has the peculiar

and very agreeable flavor of Otto of Rose, and this is so strong that to eat more than one at a time is almost unpleasant. It has a very sweet taste and flavors some soups finely. Hedges are often made of Lime trees; with their exquisite green leaves they form a superb object with their clusters of white blossoms. We must quote another page respecting

THE SCENERY.—“The style of the buildings is not dissimilar to that which is found in the Orient, and the trees and vegetable products increase the resemblance. Particularly in approaching Havana from the interior, the view of the city resembles almost precisely the Scriptural picture of Jerusalem. The tall, majestic Palms, with their tufted tops, the graceful Cocoa-nut tree, and many other peculiarities, give to the scenery of Cuba an Eastern aspect, very impressive to the stranger. It is impossible to describe to one who has not visited the tropics, the bright vividness with which each object, artificial or natural, house or tree, stands out in the clear liquid light, where there is no haze or smoke to interrupt the view. Indeed, it is impossible to express fully how *everything* differs in Cuba from our own country so near at hand. The language, the people, the climate, the manners and customs, the architecture, the foliage, the flowers, and the general products, all and each afford broad contrasts to what the American has ever seen at home. The visitor seems to have been transported into another quarter of the globe, and believes himself in distant Syria or remote Asia.”

The soil of Cuba realizes DOUGLAS JERROLD's remark of Australia, “just tickle her with a hoe and she laughs with a harvest.” So fertile a soil is not known to exist in any other part of the globe. But this lovely climate and beautiful land are made gloomy, alas! by the persecutions of their oppressors. Our author consoles his countrymen by assuring them that the Moro Castle's boasted strength is “chimerical!” There are some among us who will be glad of the intelligence.

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TRANSPLANTING TREES IN THE AUTUMN.—“Do you approve of fall planting?” is a question asked us every day. Our answer is, *yes*, under these circumstances:

1st. When the ground is of such nature and in such condition that water will not lodge around the roots of trees during winter. To plant trees in holes sunk in stiff, tenacious soils, is a certain method of killing them.

2d. The trees should be *perfectly hardy*. All delicate or half-hardy trees should invariably be planted in the spring. If it be necessary to take them up in the fall, they had better be laid in by the roots in a *dry soil*, sheltered from the cold, cutting winds, and, if necessary, protected with boughs of evergreens or something of that nature.

3d. We do not approve of planting evergreen trees in the fall, unless the very hardiest sorts, and that quite early, say in September or first of October, in time for the trees to re-root, partially, before hard frosts; and they should be sheltered from the sun and wind by a thick screen of evergreen boughs well secured around them.

4th. Plant all trees *early*—as soon as circumstances will permit after the wood is ripe. Don't wait till the leaves fall, but cut them off, being careful not to injure the buds. Late planting, however, if well done, may be equally successful. We transplant any time most convenient, between the first of October and first of May. Last winter, in December, we planted several hundred of specimen trees, from one to six years old, and lost not over two or three in the whole. Many of the bearing trees, notwithstanding the drouth, have borne and ripened fine specimens of fruit.

5th. Secure all trees from being blown about by the winds, and mulch with half-rotten manure or leaves three or four inches deep.

Asparagus, Rhubarb, Gooseberries, and Currants, should all be planted in the fall, and as early as possible. Also, hardy bulbs, such as Hyacinths, Tulips, Narcissus, Crocus, Crown Imperials, and Lilies. It is also the best season to top-dress and renovate neglected trees of all sorts,—to make new walks and repair old ones—to lay down turf, and perform such operations as grading, draining, trenching, &c., incident to the formation of new gardens, lawns, &c. Our springs are short, and hot summer weather very often comes too soon. It is therefore well to make a good use of every hour between this time and the freezing of the ground.

STRAWBERRY CULTURE.—A correspondent of "*The Country Gentleman*" thinks the plan we recommended, in the August number, of planting in rows, "radically defective," and declares himself in favor of beds; but we must let him speak for himself:

"I have sold about three thousand quarts this season, mostly Hovey's, and many of them were an inch and five-eighths in diameter, and they were grown on beds two and a half feet wide, and averaging a plant to every five or six inches on the bed. I am not an advocate of letting all the runners grow till they have made the bed one solid mat, but do contend that Strawberries may and should be grown in beds, because it is attended with less trouble, and vastly more worth can be obtained from an acre, for I have grown at the rate of seventeen hundred dollars to the acre at twenty-five cents a quart, and I know of others doing as well.

"And here let me say that I have never protected my beds in winter, or mulched the alleys in summer; nor have I ever had any trouble in selling them, but could to-day engage the next year's crop to any fruit dealer in our market; which by the way knocks down, I think, another position taken by the Editor, which is, that every system of culture which stops short of stirring the soil around each plant is defective. It seems to me perfectly clear that to put out Strawberry plants three feet by eighteen inches, would require five acres to get as much worth as can be obtained from one acre of beds properly managed; besides it is no small operation to cut straw to mulch ten or twelve acres. And here I will say that I do not know of a single horticulturist in this vicinity but what cultivates in beds, and I should be willing to have our exhibitions compared with those that are grown in rows.

"My advice to those who intend to put out Strawberries for field culture, is, to put out your plants as early in April as the ground will do to work, in rows two feet apart, and one foot in the row, and let the runners take possession of every other space until the plants will average one to every five or six inches, and not to allow runners or anything else to take possession after that. I would not set myself up as possessing all knowledge on the subject of Strawberry culture, but have given my experience, which, if good for anything, can be adopted—if worthless rejected. PRACTICAL.—*New Haven, Ct.*

Now, Mr. PRACTICAL may be right, but we must say that we have very seldom seen bed culture produce fine fruit, except perhaps the first season. He agrees with us in not letting the runners grow into a "solid mat," and it is because in beds they are generally allowed to grow so, and difficult to prevent from growing so, that we cannot approve of the method. It seems to us that it would involve some labor to keep plants in a *bed* thinned out to the distance of five or six inches. Every cultivator knows how all fruit-bearing plants are affected by keeping the ground open, clean, and friable, around them. During the past dry summer, we have seen *beds* utterly burnt up, while rows with the ground worked about them did not suffer in the least.



THE GRAPE, AND WINE.—At a recent meeting of the American Wine Growers Association at Cincinnati, the following was read from N. W. THATCHER, of Chillicothe:

\* \* \* \* "The great desideratum in wine growing is, doubtless, to procure a Grape possessing at once sugar in abundance, and an agreeable aroma—probably the *Catawba* (there are some spurious varieties of this Grape) possesses these qualities to a more profitable degree than any Grape we now cultivate, inasmuch as it is perfectly hardy; but this Grape should not be regarded as the type of American Grapes, for we shall yet surpass it, and to those whose palates do not accord too much with the foxy aroma of the *Catawba*, the *Herbemont* is the most acceptable Grape; but the latter is not sufficiently hardy for extensive and profitable cultivation; but as we have several varieties of that class of Grapes, we may look for the production of seedlings from them that will surpass any of the fox family. Doubtless a cross of the *Herbemont* and *Catawba* would produce a valuable Grape as to flavor and juiciness.

"It is doubtless a desideratum to obtain a Grape possessing all the requisites for good wine; that is, it should be productive, hardy, juicy, sweet and well flavored. Until we can get one Grape possessing in a sufficient degree all these, we can cultivate several varieties and attain our object by mixing the berries in the mash tub. This is desirable, at least, to afford variety in our wines, as well as to give flavor to strong-bodied wines which are without it.

"The wine I sent you was made of 75 per cent of the *Herbemont* Grape, 20 per cent of the *Catawba*, and 5 per cent of the *Constantia*, (Schuylkill.) The *Herbemont* was not fully ripe when gathered, but were picked ten days before pressing. The *Catawba* were quite ripe, and gathered some days before pressing. The *Constantia* were fully ripe, and gathered just before mashing. By fully ripe I mean 'dead ripe,' the stems brown and dry; and that is the grand point in wine making. The Grapes were picked, stood twelve hours before pressing, and no extraneous substance of any kind was added, nor has any addition since been made of any substance whatever. The wine, after coming from the press, was fermented in glass.

"The taste of the juice of the Grape, as well as for various kinds of food, becomes fixed to some particular sorts by custom, and finally to the exclusion of anything new; and hence I infer it will be difficult after a few years, to eradicate the predilection of Ohio wine—even for the foxy aroma of their *Catawba* wines. If we look forward to the exportation of wines to foreign countries, we must look for their production in Grapes of the *Herbemont* type. I am a wine grower to a very limited extent, and only as an amateur; but still my experiments are, so far as they are successful, as valuable in their results as if I crushed the Grapes of a township. I shall make no wine this season. I am satisfied that we can make as good wines in this country as in any other, and at equal price. I would prefer the best Cincinnati wine to any foreign I have ever seen; except, perhaps, the pure Xeres, Sherry, and Mangannelta, which we rarely see."

STATE OF THE VINEYARDS.—THE ROT.—It was stated that this disease had prevailed to a great extent: Mr. NEFF's vineyard, at the Yellow Springs, was almost entirely destroyed; Mr. YEATMAN had one-third of a crop; Mr. RINTZ had lost nearly all by mildew; Mr. HEATH had a good show; Mr. BUCHANAN had lost much by mildew, less by rot, but should not make 300 gallons per acre. Mr. REHFUSS had little mildew or rot where well drained. In Whiteoak and in Kentucky, there was little damage. On Indian Hill it was very bad. Mr. KINZBACK stated that it was bad up the river; they would make a third of a crop. Mr. ROSS had not much rot and a little mildew, injured by frost in the spring; he would average a third of a crop; Mr. WERE, who had no mildew on his widely planted vines, had lost one-eighth by the rot.

Mr. BUCHANAN stated that the *Venango*, or *Minor's Seedling*, had escaped all injuries—it had no mildew nor rot.—*Ohio Farmer*.

WASHING AND SCRAPING TREES.—It is not at all uncommon, in these days of literary and practical plagiarism, for amateur horticulturists in search after truth, to ask for bread, and receive a stone,—to ask for knowledge, and receive a jumbled medley of plagued nonsense, from some new-fledged stripling who fancies himself qualified by nature to teach mankind.—And never was this more truly and strikingly apparent, than in a paper signed R. MORRIS COPELAND, which has been published in some of the journals as emanating from the Massachusetts Horticultural Society. I had thought, Mr. Editor, that this piece of nonsensical, absurd, and contradictory jargon, would, from its very character, exonerate any sensible and intelligent member of the Massachusetts Horticultural Society, much more the Society itself, from any odium attached to sending such a production into the world. It would seem, however, that this R. MORRIS COPELAND has, in publishing this precious piece of bombast in one of the Boston papers, purposely, or, to be charitable, unintentionally identified the Massachusetts Horticultural Society with the paper, simply because such paper was presented to the Society and ordered to be laid on the table, and printed for the use of the members, as such worthless papers generally are. Nor would the manifest vanity of the author of such paper, sending it of his own accord, and entirely unknown to any other person, even to the other members of the committee, deserve the slightest notice, other than that silent contempt generally accorded to such a proceeding. But when we find the same person vilifying and abusing as carping critics, &c., all and every one who chooses to condemn his so-called report, as he has done in the "*Practical Farmer*," a very good paper published in this city, then I say we think it almost time to inquire who this mighty ACHILLES in tree-seraping is?—what amount of experience he has embodied in the report, and brought to bear on the subject?—and, moreover, whether said paper is sanctioned by the Massachusetts Horticultural Society, or even a committee of it?

On inquiry, we find this doughty opponent of the experience of every intelligent horticulturist who has given any attention to the subject, to be a new-fledged stripling from a public school, who made his appearance last year about Boston as a Landscape Gardener,—the science and art of which, we believe, he learnt at said school,—and who has been found unable to tell the names of even the commonest forest trees, keeping the culture and diseases of such trees out of the question. Do you not feel ashamed, you carping critics and snarling editors, for *stigmatising a paper issuing from so respectable a source?* But, the names of MARSHALL P. WILDER, SAMUEL WALKER, JOSEPH S. CABOT, &c., are lugged in by our hero of the wire brush, to back up his impudent deception. Let me ask, will those gentlemen acknowledge the parentage of such a paper? But hold on, I have a host of authorities. I have, says the learned investigator of this useful subject, "composed my report of the written expressions of EMERSON, AGASSIZ, RUSSELL, GRAY, HARRIS, &c." So that this learned reporter has investigated the pages of these authors, and not the subject for which the committee was appointed by the Society; and instead of patiently and perseveringly investigating a subject requiring years of observation and experience on the part of the investigator, we have a jumbled report composed of sentences and disconnected remarks from the writings of the authors above mentioned, interspersed with some silly, insipid balderdash of his own; the whole so garbled as to be perfectly unintelligible, and so contradictory as to mean neither one thing nor another.

And who were the committee? The other two, from want of time, or from some other cause, never read the report *until they saw it in a public paper*. They deny knowing anything about it; and consequently it was not even the report of a committee of the Society, nor do I believe that three men could be found in the whole Society, who would put their names to such a report. From his splenatic remarks in the "*Practical Farmer*" of Saturday the 19th, R. MORRIS COPELAND appears terribly insensed at the remarks in your last number, at the queer set of resolutions, &c., and says: "*An argument based upon facts, as well as common sense, deserves to be answered by arguments of a similar nature; yet no one can find in all of the two, and most of the four articles, anything beyond word criticism and the absolute dicta of men whose opin-*



ion is worth just as much as *their education, experience, and reasoning*, can induce the reader to give, and no more." Is this not the acme of practical puppyism?—yet precisely what we would expect from this doughty garbler of other people's books, who seems so entirely ignorant of practical horticulture and arboriculture, that, in the plenitude of his benignant charity, he considers every other person as much in need of teaching as himself.

I expect the usual fandango about writing without signing my proper name, but will promise him, if he will write good English, and behave like a man, I shall address him openly; if not, let him console himself with the reflection of a better man, that a secret friend is better than an open foe. A MEMBER OF THE MASSACHUSETTS HORTICULTURAL SOCIETY.—*Boston, Aug. 21.*

Our correspondent is well and widely known as a practical and scientific horticulturist of experience—a man who has works as well as words to sustain, whatever position he may take. We wish his criticism were milder and less personal; we abhor personalities in which the public can have but little interest, and which are always unedifying and unpleasant. The truth can always be vindicated and error exposed without the use of names. The innocent young gentleman in question, however, has voluntarily exposed himself to attack, and he must bear the consequences.

THE CURCULIO.—At a meeting of the New York State Agricultural Society, at Albany, Feb. 7th, 1854, four gentlemen and myself were put on a committee to test a discovery of a remedy for the Curculio. Subsequently this committee was reduced to three, on account of objections made by the discoverer of so many being possessed of his discovery. Now, as I was not favored with the secret, and consequently was not able to test it with a discovery of my own, published in the *Horticulturist*, Vol. 6, page 420, in 1851, I am not able to give you an account comparing the two modes of preventing the attacks of that most fearful insect, as I expected to. I send you, accompanying this, a small box, containing specimens of Plums raised by me by applying my remedy, accounts of which are contained in Vol. 6, page 420, also page 524, and in Vol. 7, page 359 and 432, and which I take pleasure in referring to for the benefit of your readers. THOS. W. LUDLOW, JR.—*Yonkers, N. Y.*

The specimens of Plums referred to did not bear the slightest trace of the Curculio, and we are inclined to believe that Mr. Ludlow's remedy is not without efficacy. We have never tried it; but many of those who have bear testimony in its favor. Our remedy is to *shake* the trees, and pick up and destroy *daily* all unsound fruits; thus we lessen the number of Curculios, and get heavy crops. The Plum crop here this season is prodigious—every tree seems to be *overloaded*. Trees that never bore a Plum before are now breaking down. *All* the remedies tried in this region, the present year, will be entirely successful.

PEACH CULTURE IN OHIO—THE DROUTH, &c.—A correspondent in Adams county, Ohio, writes us as follows:

"In 1853, I sold off about nine acres of Peaches to the amount of \$3,000, and this when Peaches were plenty and very cheap. Mine were the largest and finest I have ever seen, selling at from \$2 to \$4 per bushel in the Cincinnati market. This year with little over half a crop, and that crippled by drouth, my sales will reach near \$2,000.

"Lime, ashes, and bones, added to our free stone soil, has an extraordinary effect. This, with careful pruning and good culture, will produce the best of fruit.

"We have had the driest and hottest season we have experienced for twenty years. Our crops of Corn and Potatoes are poor indeed. For two weeks past there has not been a steamboat moving on our beautiful Ohio River. I hope you have had a better season in Western New York.



**SHENK PEAR.**—The dignified coolness with which you receive the bold assertions of Messrs. T., S., H. & Co., is quite refreshing. I am pleased that said company have now boldly asserted that which by implication they had said before, that I am not acquainted with the Pear about which I presumed to give an opinion. It is possible that after an acquaintance of more than ten years with this variety, and a Pomological tour through Lancaster County, (see Report Am. Pom. Soc., 1852,) I may never have "tasted a true specimen in full perfection." How many of the "lovers of the Pear," where the *Shenk* is known, are familiar with the *Bartlett*, *Ott* or *Tyson*? It is uniformly "very good" in Lancaster, very worthless here. In many localities it will undoubtedly fail.

In order to correct the correction in your August number, permit me to say there is no such Pear as *Shenk's August* known in Lancaster Co. There is, it is true, in the garden of Mr. VONDERSMITH, (recently so notorious,) whence the *Shenk* scions sent to Syracuse were obtained, a less desirable Pear called *August*, scions of which accompanied the *Shenk*. Whatever may be their relative growth at Syracuse, in Lancaster County and here the *Shenk* is one of the most vigorous growers. Indeed, among hundreds of varieties not one has grown more vigorously.

In regard to the note in your last number, permit me to say that my first acquaintance with the *Shenk* Pear was on the ground of Mr. ESHLEMAN, in Lancaster Co. Not being able to trace its history it was temporarily named after him. Subsequently specimens and scions were sent to Dr. BRINCKLE, who distributed them under that name.

Would it not be well for that Co., who have demonstrated their acute discrimination in Roses, to speak with more becoming modesty about this Pear, of which they certainly have had very limited experience. J. K. ESHLEMAN.—*Downington, Pa.*

**DWARF PEARS.**—We never saw finer bearing dwarf Pears than the present season on the grounds of BISSELL & HOOKER and of ELLWANGER & BARRY, of Rochester, N. Y. The former showed us several *Bartletts* in a row, six or seven feet in height, bearing a good crop, and appearing in every respect as healthy and thrifty as trees of the same variety standing near them, on Pear roots. Two trees of the *Louise Bonne de Jersey* presented a beautiful appearance, both from their thriftiness and dense crops of handsome fruit. We never saw fruit trees of any kind more heavily laden—an acre of such would certainly afford a large pecuniary profit. ELLWANGER & BARRY have large numbers of fine specimen trees; and although the season has been unfavorable to some, others were handsomely loaded. A small tree of the *Tyson*, about four feet high, was profusely filled with Pears, and we never saw a more beautiful picture than this graceful little tree with its trusses of ruddy cheeked specimens presented. It is to be daguerreotyped. The *Beurré Giffard*, on the same grounds, afforded specimens, notwithstanding the unusual season, having all the freshness, juiciness, and high flavor which in former years it has been found to possess. It ripens before the *Tyson* and *Rostiezer*, or about the time of *Osband's Summer*, and, although much inferior in the vigor and beauty of the tree, is certainly decidedly ahead of the latter in the quality of the fruit. This and the *Summer Doyenné* are the two greatest acquisitions of late years among summer varieties.—*Country Gentleman.*

**THE NUTMEG TREE.**—The *California Farmer* says that at Bird's Valley and Eldorado Canon, this valuable tree is found in its greatest perfection. Trees are found here from eighteen to twenty-four inches in diameter, and full of the fruit which is contained in a covering like the coating of the English walnut. Before ripe it is soft, and quite stringent, but when mature the cover opens and the nutmeg drops. The berries or nuts ripen at various periods. Upon the same tree may be found ripe and green fruit. The ripe nutmeg is the same form, and is as fully aromatic as this fruit from Sumatra. The foliage is like the pine or the hemlock, each leaf having, however, sharp briars or thorns upon it. The fruit grows in clusters similar to the cherry, and is indeed quite ornamental. This tree can be easily grown and will become an acquisition, and we trust ere long to see it generally cultivated.

STRAWBERRIES. — I gathered sixty-four boxes of Strawberries the past summer from three beds of vines, the beds being forty-five feet long and two feet wide, with an interval of two feet between the beds. The berries were large and fair (*Walker's Seedlings*) and would have readily commanded a sale at fifty cents a box, thus causing 540 square feet of land to yield a gross income of \$32. The soil was rich garden loam only four inches deep over solid rock. The earth was wholly scraped from the rock in the intervals, and its place supplied with fresh tan. After the blossoming of the vines they were supplied with water from the pump very abundantly. During the late drouth they have not been watered at all, and yet, at this moment, after the abundant rains of last week, they appear as well as any vines in this vicinity. The intervals between the rows have become covered with vines, and I am this day cutting and removing them. It is just two years since I set out the plants, 100 in number, of which thirty-three died.

I disregarded all authority in setting out vines in such shallow soil, and did it simply because I did not know in what other way to attempt to cover a barren spot in my garden. I have been successful, and give the fact for the benefit of those who may be similarly situated, and not as foundation for any generalizations. JAMES RITCHIE.—*Roxbury, Mass., September 12, 1854.*

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### Notices of Books, Pamphlets, &c.

#### A SCIENTIFIC EXPOSITION OF THE CAUSE AND CURE OF THE POTATO ROT.

The above is the title of a book just published by J. N. CHANDLER, Adrian, Mich. A very small book it is, but it may be all the better for that. Mr. CHANDLER holds that "there are two causes, *primary* and *secondary*. The primary cause is the weakening and refining processes which have been (ignorantly) carried on ever since the Potato has been cultivated. The secondary cause is,—the inferior position of the electric fluids, which is in the lower stratum of the atmosphere, (especially when the negative state is existing,) permeates everything upon the surface of the earth." The second cause Mr. C. credits to the writings of A. J. DAVIS, in which the prevalence of cholera is attributed to the electrical condition of the atmosphere. He says where iron abounds, as at Pittsburg, the Potato is free from rot, and the cholera has never raged.

We consider all that is said about electricity as pure speculation; but we find some remarks on the culture and keeping of the Potato, worthy of attention. Mr. C. endeavors to show, that high culture, and keeping the seed a great portion of the year *out of the ground*, has brought about a detriment that predisposes the tubers to diseases, as people under certain conditions are predisposed to cholera. This may be; but in Ireland, where the disease has been most destructive, the Potato is seldom housed as in this country, but kept in heaps or pits, out doors.

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THE GARDENER'S MAGAZINE, is the title of a new Horticultural Journal, issued at Boston, by Mr. WM. S. KING, well known as one of the editors of the *Practical Journal* and *Journal of Agriculture*, and Secretary of the National Agricultural Society. He is determined to have his hands full; but he is a young man, full of life and energy, and as he says himself, prefers to *tear* out, rather than *rust* out. A long list (too long) of able contributors are announced, and among them they will undoubtedly make a good journal. The first three numbers, just received, look well. It is published monthly, at \$1 per annum. Cheap, cheap — and we wish it success. We are glad to see Horticultural Journals on the increase.

OHIO AGRICULTURAL COLLEGE AT OBERLIN. — We have received a circular, setting forth the objects and plans of this Institution, and take pleasure in commending them to public notice:

"THE OBJECT. — To place within the reach of Farmers, both old and young, the means of acquiring a thorough and practical acquaintance with all those branches of Science which have direct relations to Agriculture.

"PLAN. — It is proposed to give Courses of Lectures during the winter months, on all the several departments of Agricultural Science, each principal division being assigned to a different Lecturer, and systematically presented in the same manner, as Medical Science is taught in Medical Colleges.

"ADVANTAGES OF THE PLAN. — It is adapted to meet the wants of the present as well as of the rising generation. It is proposed to occupy only the winter months, when the farmer himself, or his sons, may best spare the time.

It presents a view of the whole field of the Sciences connected with Agriculture, in the shortest period of time, and therefore makes their acquisition possible to multitudes who could not attend Universities, or even Schools on experimental farms.

"SUBJECTS. — The branches taught will embrace whatever pertains to Animals, Vegetables, Land or Labor.

LECTURERS. — *James Dascomb, M. D.* — Chemistry, in all its applications to Soils, Manures, Animal and Vegetable Life, and the Domestic Arts, &c.

*Norton S. Townshend, M. D.* — Comparative Anatomy and Physiology, with special reference to the feeding and breeding of Stock; History and Description of Domestic Animals in their several varieties; Veterinary Medicine and Surgery; Entomology.

*John S. Newberry, M. D.* — Geology and Mineralogy; Botany, Descriptive and Physiological with special reference to the history and habitudes of Plants cultivated in the Garden and Orchard, or in the Field — the various modes of Culture, and Soils adapted to each.

*James H. Fairchild, A. M.* — Natural Philosophy; Agricultural Mechanics; Farm Implements; Meteorology; Elements of Engineering and Land Surveying; Rural Architecture; Landscape Gardening, and Farm Book-keeping.

ADDITIONAL FACILITIES. — A Reading Room, supplied with the principal Agricultural Periodicals, will be open to students at all hours. They will also have access to an extensive Library.

TERMS. — For the entire Course, \$40. Board and rooms may be obtained at \$2 per week, exclusive of fuel and lights.

Letters of a business character may be addressed to Dr. J. Dascomb, Oberlin, Ohio.

CATALOGUES RECEIVED. — *Catalogue for 1854, of Fruit and Ornamental Trees, Vines, &c., cultivated and for sale by ISAAC PULLEN, at his nurseries, near Hightstown, Mercer county, New Jersey.*

#### Answers to Correspondents.

WHAT form of insect is the parent of the slugs so destructive to Pear and Cherry leaves? Is there any preventive for the nuisance? The dusting with ashes or lime, or drenching with tobacco water, to be effectual, must be repeated after every rain, if not more frequently, and where large and tall trees are affected, is but an imperfect remedy, besides being a very laborious one. SUBSCRIBER.

Prof. HARRIS describes the "Slug Fly" under the name of *Selandria Cerasi*, as follows: "The Slug Fly is of a glossy black color, except the first two pairs of legs, which are a dirty yellow or clay color, with blackish thighs, and the hind legs, which are dull black, with clay-colored knees. The wings are somewhat convex, and rumpled or uneven on the upper side, like the



wings of the saw-fly generally. They are transparent, reflecting the changeable colors of the rainbow, and have a smoky tinge, forming a cloud or broad band across the middle of the first pair; the veins are brownish. The body of the female measures rather more than one-fifth of an inch in length; that of the male is smaller. In the year 1828, I observed these saw-flies on Cherry and Plum trees, in Milton, on the tenth of May; but they usually appear towards the end of May or beginning of June. Soon afterwards some of them begin to lay their eggs, and all of them finish this within three weeks, and disappear. Their eggs are placed singly within little semicircular incisions through the skin of the leaf, and generally on the under side of it. On the fourteenth day afterwards the eggs begin to hatch, and the young slug-worms continue to come forth from the 5th of June till the 20th of July." They attain their growth in twenty-six days, leave the trees, and burrow in the ground. In sixteen days their transformation is completed, and they emerge from the ground in the fly state, and commence to lay eggs for another brood. We have not often, however, more than one brood in one season.

We know of no better remedy than dusting with lime or ashes, and this we admit to be somewhat difficult in the case of large trees. Among the nursery rows we use dry, fine earth, as we get it among the trees; and it answers the purpose.

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THE August number of the *Horticulturist* is received, and your answer to a subscriber at Elkton, Todd Co., Ky., relative to some diseased Apple twigs sent you. I do not wish to be troublesome, but would be glad to hear further from you, relative to the disease known with you, as fire-blight. What we call fire-blight in the West, may differ from what is known as that disease with you. Is the wood as well as the foliage killed in fire-blight, as far as the disease extends? (1)

In the diseased trees, of which I sent you a specimen, the foliage alone is killed, although the wood, and sometimes the fruit, is covered with the same sort of deposit. The wood does not appear to be injured by it, but remains plump and healthy, and with a firm belief that it was the work of an insect, I have put in thousands of grafts, which were covered with it at the time. The older and less thrifty trees are more liable to be attacked than others; of both the Apple and the Pear. However, I have noticed some exceptions to this rule. J. S. DOWNER, — Elkton, Ky.

(1) It is; and, as a general thing, the woody portion of the tree is affected with the disease, beyond recovery, before a leaf turns black. The first indication of the disease is often the sour smell which it emits, especially when a tree is first taken and is yet full of sap. It seems to operate principally on the newly-formed parts immediately under the bark. It spreads among the circulating fluids with great rapidity, so that a tree may in fact be *dead* without a leaf being withered or black. If the attack is discovered early, and the affected branch or portion of bark be cut cleanly and thoroughly out, leaving no trace of the disease, the tree will recover.— We have ourselves saved a large number of trees in this way; but if neglected a day, or in some cases a few hours, the disease becomes deeply seated, and the tree is in a hopeless case.— Sometimes, as the subject is more or less susceptible, the leaves turn black immediately; while in others, where a portion of the wood remains sound enough to keep up a sort of communication between the roots and leaves, the latter will remain green, or a sickly-looking green, for a whole season. In some cases trees recover without any aid. These are when the circulation of the fluids is very slow, as in old or stunted trees; the disease attacks a branch or portion of the tree, and expends its venom without affecting the principal channels in which the vital fluids circulate.

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EVERGREEN HEDGES.—Will you please inform me of the best time and mode of trimming a Hemlock hedge which was set out about the 25th of May. It is not that its rapid growth demands any very vigorous pruning, but because it is so thin and straggling. A CONSTANT READER.

Let it alone till next spring, and shear it just before new growth commences. If your plants are small, they will thicken without much shearing; but if tall or thin, they will scarcely ever make a good hedge.

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Will you please inform me, through the *Horticulturist*, by what rule, in your opinion, one should be governed, in figuring any fruit to be placed before the public, as a representation of the fruit produced by any plant? Should the extra or largest fruits be selected, the average size, or what size? J. J. — Boston.

Our own rule is to select fair *average* specimens produced under *good* culture; the very largest, or the smallest would of course convey an erroneous idea of the fruit.

INCLOSED I send you a couple of Cherries, also a short bit of its stock and a leaf. I think it will be something new to you. It grows wild here on the shores of Lake Erie. I have a few stocks of it in my garden, and have budded them with the Bigarreau. The buds look very fine, but I do not know how they may prove to be; but if they grow, I think they will make fine dwarf trees, for the stock never in its wild state grows more than six or seven feet high, and generally bears immense crops when only eight or ten inches high. It is called the Sand Cherry here, but what its real name is I don't know. If you can tell, I should be glad to learn. Those I send are very imperfect specimens on account of the drouth; their general size is about the size of the common pie Cherry in their wild state. DANIEL LEE. — *Normandale.*

This must be the *Cerasus depressa* of PURSH, and *C. pumila* of MICHAUX. The common name of which is the "Sand Cherry." Its employment as a stock is well worthy of experiment.

I wish to propagate some Apple, Pear, Peach, Plum, Cherry Almond, and Quince trees, from cuttings. Please inform me when they should be cut from the parent trees; when they should be planted in the ground, how the ground should be prepared, how the cuttings should be managed during the growing season, whether watering and shading is necessary or not. What length cuttings should be cut, and how prepared for planting? Where do they emit roots, at the base or at the buds that are inserted under the ground? In short, give me an account of the whole mode of cultivation, from the time the cutting is removed from the parent tree until it has grown to a well rooted tree. A CONSTANT READER.

We regret we cannot comply with the very reasonable request of "A CONSTANT READER;" but, none of the trees mentioned, except the Quince, can be propagated from cuttings, and "*The Fruit Garden*" gives a much more complete account of their management than we could possibly here.

I HAVE a piece of ground which is called Walnut soil with us. It is a deep, and very black soil, becoming loose when worked. I wish to know if such ground would be suitable for fruit, such as Peaches, Pears, and Grapes. I have also a lot of ground which is a heavy clay, mixed with gravel. Will this do for the Plum and Apricot? J. H. N

The "Walnut soil" will answer for Peaches and Grapes, if *perfectly dry* at all seasons. The gravelly clay is just what you need for Pears and Plums, and Apricots on Plum stocks.

(W. S. H., Galion, Ohio). BUDDING.—If you have failed to prepare your Basswood bark for tying buds, perhaps you can get *bass mats*; these, if new, sound, and well soaked in water, will answer. If this cannot be had, try coarse, strong woolen yarn. We have never tried Cornhusks. You want something that will fit close, and tie secure, to exclude air.

GRAFTING.—Do not use old roots, or pieces of roots of Apple trees; it is a most vicious mode of propagating fruit trees. There is no necessity for it, as good healthy seedlings are now abundant in all parts of the country. Root-graft only strong growers; bud the others on strong stocks.

### Horticultural Societies, &c.

MASSACHUSETTS HORTICULTURAL SOCIETY.—The following is a list of the premiums awarded at the late Exhibition of this Society.

PRIZES. — *Apples.* — For the best 30 varieties, of 12 specimens each, the Lyman plate, valued at \$30, to Messrs. Burr, Hingham; for the second best, \$20, B. V. French, Braintree; for the third best, \$10, Josiah Lovett, Beverly. For the best twelve varieties of twelve specimens each, the Society's plate, valued at \$20, B. V. French, Braintree; for the second best, \$15, J. B. Moore, Concord; for the third best, \$15, Messrs. Burr, Hingham; for the fourth best, \$8, John Gordon, Brighton. For the best dish of Apples, twelve specimens of one variety, \$6, James Guild, Roxbury; for the second best, \$5, Francis Marsh, Dedham; for the third best, \$4, John Gilbert, Hillsboro', N. H.; for the fourth best, \$3, B. V. French, Braintree.

*Pears.* — For the best thirty varieties of twelve specimens each, the Lyman plate, valued at \$30, to M. P. Wilder, Dorchester; for the second best, \$10, Hovey & Co., Cambridge; for the third best, \$10, Josiah Stickney, Watertown. For the best twelve varieties of twelve specimens each, the Lyman plate, valued at \$20, Josiah Stickney, Watertown; for the second best, \$15, Josiah Richardson, Cambridge; for the third best, \$12, W. R. Austin, Dorchester; for the fourth best, \$8, J. H. Stetson, Quincy. For the best dish of pears, twelve specimens of one variety, \$6, Nahum Stetson, Bridgewater; second best, \$5, Josiah Richardson, Cambridge; third best, \$4, John Gordon, Brighton; fourth best, \$3, J. A. Stetson, Quincy.

*Assorted Fruit.* — For the best basket of fruit of various kinds, \$8, to M. P. Wilder, Dorchester; for the second best, \$4, Azell Bowditch, Roxbury.



*Grapes.*—For the best five varieties, two bunches each, \$12, W. C. Strong, Newton; second best, \$8, Mrs. F. B. Durfee, Fall River; third best \$5, Charles E. Grant, Roxbury. For the best two varieties, two bunches each, \$6, Thomas Page, Waltham; second best, \$4, C. S. Holbrook, E. Randolph; third best, \$2, J. Pritchard, W. Roxbury.

*Peaches.*—For the best dish of not less than twelve, \$5, William Bacon, Roxbury; second best, \$3, D. E. Jewett, Westboro.

*Vase Bouquets.*—For the best pair suitable for the Bradlee Vases, a prize of the Bradlee plate, valued at \$10, to Evers & Bock, Brighton; second best, \$6, James Nugent, Jamaica Plain; for the best pair for the Society's Marble Vases, \$10, Winship & Co., Brighton.

*Parlor Bouquets.*—For the best pair suitable for the parlor, \$8, to M. P. Wilder, Dorchester; second best, \$6, Evers & Bock, Brighton; third best, \$5, James Nugent, Jamaica Plain; fourth best, \$3, Winship & Co., Brighton.

*Pot Plants.*—For the best display of not less than twenty pots, a prize of \$12, to J. P. Cushing, Watertown; second best, \$10, Thomas Page, Waltham; third best, \$8, Azell Bowditch, Roxbury; fourth best, \$5, M. P. Wilder, Dorchester.

*Coccombs.*—For the best six pots, a prize of \$3, to J. Kelley, Watertown.

*Vegetables.*—For the best display, and greatest variety at the Annual Exhibition, \$10, to B. V. French, Braintree; second best, \$8, Henry Bradlee, Medford; third best, \$6, Stone & Co.; fourth best, \$4, John B. Moore. Mammoth Squash.—For the largest and best, the Society's Silver Medal, to Amos W. Stetson, E. Braintree; for the second best, \$3, Messrs. Derby, Salem. Pumpkins.—For the largest and best, the Society's Silver medal, to T. McCarty, Roxbury; for the second best, \$3, George Nelson, Lexington.

*GRAPEVINES.—Peaches and Nectarines.*—George W. Willis, Chelsea, \$3; Josiah Richardson, Cambridgeport, \$3; Nahum Stetson, Bridgewater, \$3; H. Y. Gilson, E. Cambridge, \$2; E. C. Stevens, Dorchester, \$2.

*Baskets of Assorted Fruit.*—E. M. Richards, Dedham, \$2; W. A. Crafts, Roxbury, \$2; Nahum Stetson, Bridgewater, \$3; Misses Cordwell, Roxbury, \$2.

*Grapes.*—William Blake, Jamaica Plain, \$2; Joseph Breck & Son, Brighton, \$5; W. C. Strong, Newton, \$3.

*Apples.*—A. D. Williams, Roxbury, \$10; Bowen Harrington, Lexington, \$6; Samuel G. Hyde, Newton, \$8; Josiah Stickney, Watertown, \$6; W. R. Austin, Northern Spy, \$3; John Parker, Acton, Blue Pearmain, \$3; Josiah Richardson, Cambridge, Ribston Pippin \$3; Levi Brigham, Saxonville, Nonpareil \$3; E. M. Richards, Dedham, Gravenstein \$3; Jas. Eustis, S. Reading, Gravenstein \$3; Theodore Clapp, Dorchester, Gravenstein, \$3; John Gordon, Brighton, Grand Sachem, \$3; Josiah Stickney, Watertown, 20 oz. Pippin, \$3; A. W. Withington, Dorchester, St. Lawrence, \$3; Benjamin Bliss, Porter, \$3; Peter Lawson, Lowell, collection, \$5; Thos. Page, Waltham, do, \$3; A. W. Stetson, E. Braintree, do, \$1; C. S. Holbrook, E. Randolph, do, \$3; Cheever Newhall, Dorchester, do, \$3; John A. Kenrick, Newton, do, \$3; James Eustis, S. Reading, do, \$7; Evers & Bock, Brighton, do, \$6; E. Winslow, Roxbury, do, \$3; Eben Wight, Dedham, do, \$6; Josiah Newhall, do, \$3.

*Pears.*—George Southard, Roxbury, Louise Bonne, \$3; Samuel Downer, Dorchester, fine specimens, \$10; Samuel Walker, collection, \$10; J. S. Cabot, Salem, do, \$10; J. S. Sleeper, Roxbury, do, \$5; Josiah Lovett, Beverly, do, \$5; Winship & Co., Brighton, do, \$5; William Bacon, Roxbury, fine specimens, \$5; Henry Vandine, Cambridge, collection, \$5; Robert Manning, Salem, do, \$10.

*Melons.*—B. V. French, Braintree, \$1; Nahum Stetson, Bridgewater, \$3; Josiah Stickney, Watertown, \$2; Galen Merriam, Newton, \$1; A. D. Webber, W. Needham, \$2; H. Bradlee, Medford, \$2.

*Pot Plants.*—Winship & Co., Brighton, \$8; Evers & Bock, Brighton, \$5; Geo. W. Colamore, Boston, \$2; Mrs. Gorely, \$1; Moses B. Williams, Brookline, \$5; M. P. Wilder, Dorchester, \$5; J. Mason, Cambridgeport, \$1.

*Floral Designs.*—Mrs. William Kenrick, Newton, \$5; Miss F. A. Russell, Newton, \$2; W. C. Strong, Newton, \$7; do do \$1; Miss Fannie Wight, Dedham, \$5; Curtiss & Lincoln, Boston, \$6; Miss Mary M. Kenrick, Newton, \$3; Azell Bowditch, Roxbury, \$8.

*Bouquets.*—William E. Carter, Cambridge, \$2; C. S. Holbrook, East Randolph, \$2; Messrs. Burr, Hingham, \$4; Jonathan Morris, Newtonville, \$5; Master A. G. Read, Boston, for basket artificial flowers, \$2.

*Vegetables.*—For fine display—John Gordon, Brighton, \$2; Josiah Crosby, W. Cambridge, \$3; Nahum Stetson, Bridgewater, \$4. Davis Seedling Potatoes, display—H. L. Shattuck, Concord, \$2; A. Bowditch, Roxbury, \$5. Josiah Stickney, Watertown, \$4; S. B. Pierce, Dorchester, \$2; C. S. Holbrook, E. Randolph, \$2. Sea Kale, display: James L. Little, Swampscott, \$1; Timothy McCarty, Roxbury, \$3; James Nugent, Jamaica Plain, \$3. Squash.—Winship & Co., Brighton, \$2. Hybrid Squashes.—A. W. Stetson, E. Braintree, \$10. Corn, display.—Messrs. Burr, Hingham, \$2; Bowen Harrington, Lexington, \$4; A. D. Williams, Roxbury, \$4. Galen Merriam, Newton, \$4; A. D. Webber, Needham, \$4. Lima Beans.—Samuel Jordan, East Stoughton, \$1. Potatoes, display.—James Hyde & Son, Newton, \$8; A. R. Pope, Somerville, \$2. Celery.—Bowen Harrington, Lexington, \$2. Potatoes, (Davis), J. B. Moore, Concord, \$2. Squash, collection.—E. M. Richards, Dedham, \$1; George R. Sampson, Roxbury, \$2. Tomatoes.—Peter Lawson, Lowell, \$1. Potatoes, (new).—B. V. French, Braintree, \$2. Summer Squash.—Henry Bradlee, Medford, \$3.

THE Fall Exhibition of the Genesee Valley Horticultural Society was held on the 21st and 22d of September. The show of Fruit, particularly Pears, was very fine. The exhibition of Flowers was not equal to some previous shows, in consequence of the extreme drouth of the summer and fall.

We have received notices of several exhibitions, which took place late in September, which we shall give in our next.







## Parks and Pleasure-Grounds for the Farmers.

THE present is a time of agricultural improvement and progress without a parallel in this country. Improved implements, improved stock, better cultivation, better fences and buildings, meet us everywhere in the country; and farmers are growing "*rich*," in the common acceptance of that term. We rejoice at this, and so must every man who feels a lively interest in our national welfare, because agriculture is our main stay. If it fails to prosper, we can have no prosperity. It is the produce of our farms—the fruits of farm industry—that animate trade and commerce, that build up cities and villages, construct railroads and canals, and cover our lakes and rivers and the broad seas with fleets of vessels. What a calamity—what an universal panic and prostration of business would the failure of even one crop over the whole country bring upon us!

Agricultural progress and prosperity, then, are subjects that no man, whatever may be his calling, can regard with indifference; and the agricultural classes themselves, as a body, by their intelligence, industry, energy, and manly independence, command universal admiration and respect. These are our honest sentiments—not the fulsome flattery of a stump speech or holiday oration. Our sympathies are, and ever have been, and will be, with the tillers of the soil. Our own life, so far, has been spent in the country, and we have earned our bread by the cultivation of the soil. We can speak of both its toils and pleasures from actual experience. We know that some regard it as a vulgar and plodding pursuit, fit only for strong, rough, and uneducated men; but the number of those who think so is diminishing rapidly. Men of taste and intelligence are now ambitious of being agriculturists; and schools and colleges for training the sons of farmers are beginning to attract attention, and will soon work a change in public sentiment in regard to the respectability and importance of the agricultural profession.

This brings us to the point on which we proposed to make a few suggestions, when we took up our pen. We wish to see the farmer's home—the farmer's life—made more attractive. Hitherto, as a general thing, the improvements which have been made are of the *useful* kind, having reference mainly to the supply of man's physical wants. Most of our farms must be regarded as mere manufactories of food and clothing; very little has been done to gratify the intellect, taste, or feelings—the higher and nobler attributes of our nature. And this is one reason, beyond a doubt, why many young persons who have, by means of education, reading, and society, acquired a certain degree of refinement, become dissatisfied with agricultural life, and have sought the city. Intelligent, educated men, can not surely remain satisfied with being mere growers of grain and breeders of stock,—they must love their home; and to merit their love and attachment, that home must possess something of beauty, for the love of the beautiful is an instinct of man's nature. A large portion of the population is continually on the move;—the old home has no hold on their affections—or at least



not enough to overcome the novelty of a new one. We see the population diminishing in the very heart of the finest agricultural district in America, where nothing is so much needed as human beings. It is at certain seasons impossible to procure laborers enough to do the work. This state of things is unfavorable to the perfect development of the country's resources, and equally unfavorable to the attainment of a higher and happier social condition.

It is not unreasonable, we trust, to expect, and even to urge, some reform on this point. Make home attractive;—cultivate the taste, and feelings, and affections, as well as you do your fields. Why should a wealthy farmer, with his 50, 100, or 200 or 300 acres of land, content himself with a rod or two of a door-yard, and a dozen of shade trees, shaped and managed after the precise fashion of a village plot? Why can he not, just as well, have a park and pleasure-ground of several acres around his house, broad glades of lawn, and groups of trees, separated from the cultivated portions of the farm by green hedges? This, with a well-stocked orchard and good ample kitchen-garden, would come up to our ideas of a country home; and it would be impossible for children to grow up in such a home without becoming attached to it, and having their tastes expanded, their feelings refined, or without appreciating the comforts and blessings of a country life. A rod or two of a door-yard for a farm-house!—what a mockery! There is something incongruous in the very look of it that can not fail to strike every observing person; it wants what the lamented DOWNING called "*local truth*" in architecture, which he explains in this way:

"*Local truth* in architecture is one which can never be neglected without greatly injuring the effect of country houses. And yet, such is the influence of fashion and false taste, and so little do the majority of citizens trouble themselves to think on this subject, that nothing is more common in some parts of the country than to see the cockneyism of three-story town houses violating the beauty and simplicity of country life. In our own neighborhood there is a brick house standing in the midst of gardens and orchard, which has a front and rear pierced with windows, but only blank wall at the sides: looking, in fact, precisely as if lifted out of a three-story row in a well-packed city street, and suddenly dropped in the midst of a green field in the country, full of wonder and contempt, like a true cockney, at the strangeness and dullness of all around it. During a drive on Long Island, last autumn, we saw with pain and mortification, the suburban villa of a wealthy citizen, a narrow, unmistakable 'six-story brick,' which seemed, in its forlornness and utter want of harmony with all about it, as if it had strayed out of town, in a fit of insanity, and had lost the power of getting back again.

"To give an expression of local truth to a country house, it should always show a tendency to *spread out* and extend itself on the ground, rather than to run up in the air. There is space enough in the country; and because a citizen has lived in town, where land is sold by the square foot, and where, in consequence, he has to mount four pair of stairs daily, it is surely no reason why he should compel himself to do the same thing in the country. Indeed, economy in the first cost of a house (that is to say, the lessened expense of building two stories under the same roof and over the same foundation) is the principal reason why most country houses are not still more ample, extended, and rambling on the surface, than they usually are."

The same principle holds true in regard to the arrangement of grounds about country houses. "The cockneyism of three-story town houses" is no more out of place in the country, than is the village door-yard before a farm-house.

But some careful farmer will ask us, "How can we afford to lay out parks and pleasure-grounds, and keep them in fine condition? It would cost us more than the whole labor of our farms. Only think of what an expenditure of money and labor this hedging, and planting, and mowing this pleasure-ground would involve. It would be all very well if we could afford it; but that we can not, and we must leave it to retired gentlemen who have made their fortunes in town, and come out into the country to spend them."

But we reply, You can carry out our plan without incurring a heavy expense. Hundreds of farmers in our own county of Monroe can make such a park as we propose, without feeling the cost. Fence off, with Osage Orange or Buckthorn, at a cost of about twenty to twenty-five cents a rod, five to ten acres of land immediately around your dwelling. Seed it down, and it will produce good crops of hay. You can get plenty of young Maples, Elms, Tulip trees, Basswoods, Ash, and other native trees, in the woods, which can be taken up and planted at leisure intervals in the fall, when farm labor is over, and early in spring, before it commences, and even during winter, in mild weather. Until the trees are well-established, it will be necessary to cultivate the soil around them. It will not be necessary to cover the whole ground with trees, but merely to scatter them here and there in groups, and singly, to give it a park-like character which will distinguish it at once from the cultivated fields. A little can be done now, and a little again, as leisure affords; and in a few years the work will show. Meantime the land is cropped profitably; for hay is always a paying crop, and an indispensable one. The ground nearest the house may be planted with some rarer trees—a portion of them evergreens. A small portion of the ground near the house might be separated from the main body of the park by a wire fence, or moveable hurdle fence, and kept mowed; and if embellished with a few flowering shrubs, and a few beds of flowers, all the better. But these, for economy's sake, can very well be dispensed with. When the planting is finished, and the trees fairly established, the park might be pastured with sheep, as many parks are in Europe; and thus it would always have a closely cut surface without the expense of mowing, and the sheep would be an interesting feature in its scenery. When forest trees are not within reach, we would recommend the raising of them from seed, or small plants can be purchased at the nurseries for \$2 or \$3 per 100, which, with a couple of years' growth in nursery rows, will be fit for final planting out. Only go about it, and the means will not be wanting.

Those who wish to have a plan sketched out for their guidance, can procure it at a trifling expense, from MESSRS. MEEHAN & SAUNDERS, MESSRS. COPELAND & CLEVELAND, MR. MUNN, MR. LEUCHARS, MR. HEPP, MR. GRAEF, MR. COOK, and several other gentlemen who devote themselves to the practice of landscape gardening, and whose cards will be found in our advertising pages. We wish some of these gentlemen would favor us with their views on this subject. We desire to push improvements into the

country; it must not remain, as now, confined to the precincts of cities and villages. But we must offer to country people practicable and inexpensive plans. We wish our agricultural societies would recognize the importance of the subject, and encourage some efforts by offering prizes. Their main object is to elevate the farming pursuit, and we know of no other way, at present, in which it can be done more effectually, in the older States, than by creating and fostering a taste for the embellishment of the homestead.

### THE CAROLINE DE SANSAL ROSE.\*

In looking over half an acre of Hybrid Perpetual or Remontant Roses in bloom, last summer, with a view to selecting a couple of varieties for illustration, the *Géant des Batailles* (Giant of Battles), and *Caroline de Sansal* struck us as being worthy of the distinction. The latter variety we give this month. We have no hesitation in classing this as best among the light-colored varieties. We say this, too, after having flowered it for two years beside *Paul's Victoria*, which was introduced with loud plaudits as a "*White La Reine*." This latter is a fine variety, but the flowers do not open so uniformly well as the *Caroline*, and they change color and drop much sooner.

The *Caroline de Sansal* is a very free, strong grower, almost ranking, in this respect, with *Baron Prevost*. The foliage is large and luxuriant. The flowers are very large, double, and cupped like the old *Centifolia* or *Cabbage* Rose. The color is a pale silvery blush, with a fleshy tinge in the center, resembling very much that fine popular Bourbon Rose, *Souvenir de la Malmaison*. It grows and blooms equally well on its own roots and on the *Manetti* and other stocks in common use.

Speaking of the *Manetti* Rose, reminds us of the fact that, last summer, during the dry and warm weather, many varieties on their own roots dropped their foliage; while on the *Manetti* stock they not only continued fresh and green, but remained in blossom nearly all the season. This stock seems particularly well adapted to our warm and dry summers, as it continues to grow vigorously in all weathers to a late period in the autumn.

We intended to notice at length some of the finest Hybrid Perpetual Roses, but must defer it at present.

\* See Frontispiece.





## THE PHILADELPHIA PEAR.

SYNONYMS: *Latch*, *Orange Bergamot* erroneously.

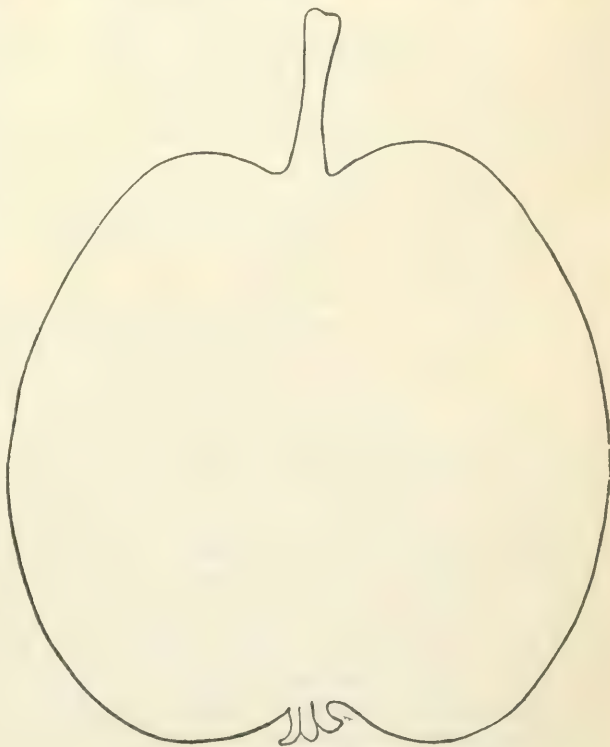
BY W. D. BRINCKLE, M. D., PHILADELPHIA, PENN.

EARLY in September, of the present year, I met with this Pear for the first time. Regarding it as a variety of the greatest excellence, I took a specimen to the recent meeting of the American Pomological Society, at Boston. This specimen was below the average size, but was the only one in my possession at that time. It was examined by the Society's Committee on Native Fruits, and received a most favorable report.

The *Philadelphia* originated at Frankford, in 1832; and, when only a foot high, was removed to the premises of Mr. FRANCIS H. LATCH, at Roxborough. Both of these villages are now within the limits of the consolidated city of Philadelphia. Mr. LATCH informs me that the tree commenced fruiting at the age of eight years, and has borne regularly and abundantly ever since.

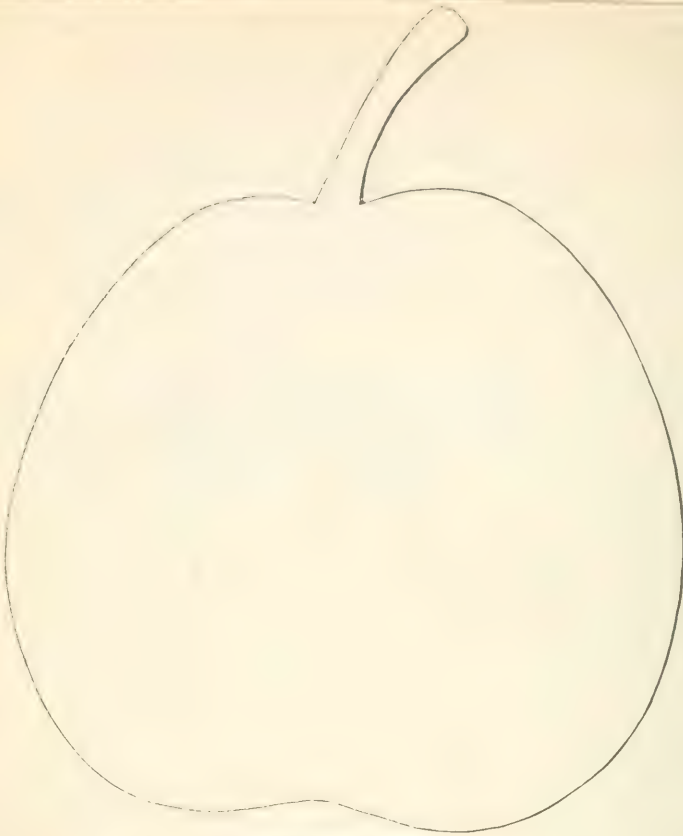
Several years ago, the existence of this variety was made known to me, under the name of *Orange Bergamot*, and specimens were promised more than once, but were never received until the present season. Its size, taken in connection with its other fine qualities, will render it one of our greatest pomological acquisitions; and, at no distant day, it will occupy a high position among the most valuable varieties of this excellent fruit. Its present name was given to it by the Native Fruit Committee of the Am. Pomological Society.

Outlines of two specimens accompany this communication. One of these specimens was eaten on the 7th of September, weighed ten and a half ounces, and measured three and three-eighths



PHILADELPHIA PEAR.

Eaten September 7th, 1854.



PHILADELPHIA PEAR.

Eaten September 27th, 1854. The last specimen of the crop.

inches in length by three and five-sixteenths in breadth; the other was eaten Sept. 27th, weighed eleven ounces, and measured three and seven-sixteenths inches by three and a half. Some of the specimens were said to be larger than either of these. With skillful cultivation, therefore, the *Philadelphia* will probably equal, if not exceed in size, as it surpasses in flavor, the largest grown specimens of the *Duchesse d'Angouleme*.

Size—very large. Form—roundish, sometimes broad ovate. Color—green, becoming yellow when fully ripe, with occasionally a brown cheek. Stem—one to one and a quarter inches long by three-sixteenths thick, sometimes fleshy at its insertion. Cavity—moderately wide, superficial. Calyx—open, medium size, set in a rather wide, shallow basin. Core—medium. Seed—brown, plump, long, acuminate, with an angle at the obtuse end. Flesh—not of the finest texture, but moderately fine, yellowish-white, buttery. Flavor—saccharine, perfumed, delicious. Quality—“very good,” if not “best.” Period of maturity—said to be from the beginning of August to the middle of September; the first specimen I saw, was eaten by me on the 7th, and another on the 27th of September.

The original tree is healthy and vigorous, and retentive of its foliage. The trunk is twenty-nine inches in circumference at the surface of the earth, and twenty-four inches at four feet above the ground. Young shoots—yellowish. Buds—medium size, triangular, greyish. Foliage—large, lively green, flat, obtusely acuminate, slightly waved, with large, light-colored ribs. Petiole—rather long, pale green, firmly adhering to the support, which is of moderate size.

[We are happy in being able to present so complete an account and description of this new American Pear. We had an opportunity of seeing and tasting it at Boston, and regard it as an important acquisition.—Ed.]

## GRAPE-CULTURE IN COLD VINERIES.

BY AMATEUR.

I CHEERFULLY comply with your request by giving "Notes of Experience in Grape Culture;" but in doing so, I feel that little can be added to the many sensible articles already published in the *Horticulturist*, particularly the practical ones of Mr. CHORLTON, Vol. VII., p. 94, and of Mr. SUYDAM, Vol. VIII., p. 78; yet in the language of your correspondent, Mr. CLEVELAND, "If all whose experience enables them to communicate *facts* would but publish them, it would go far in establishing a true standard of the quantity of fruit a vine may bear with safety, as also the period at which it may begin fruiting," &c., &c. Coinciding in these sentiments, and believing that many are deterred from cultivating this delicious fruit from causes that might be removed through a more free dissemination of knowledge, is another incentive to my contributing these notes, premising that the results are from actual experience in a "cold grapery" situated in the latitude of New York City, where neither artificial heat, nor *putrid, noxious carcasses*, have been brought into requisition.

My house is constructed in the curvilinear form, similar to Mr. VAN RENSSELAER'S, at Clinton Point, and of Mr. GREEN'S, at New Brighton. It is 50 feet in length, 20 feet in breadth, and 13 feet to the apex of the curve or ridge pole, and contains fifty vines. It is located to run due north and south, which is decidedly preferable, in this climate, to the former east and west locality, as it secures a longer period of the sun's rays without its scorching effects at meridian, and concentrates a more equable heat during the day.

My vine border, which is the essential element for success, is composed nearly as recommended by Mr. CHORLTON, with the addition of about fifty barrels of refuse charcoal or sweepings; a quantity of refuse potash in sawdust, as obtained from the floors of inspection offices; two bags of guano—nearly 400 pounds; and it was made one foot deeper than his. Vines one and two years old from the eye were planted about the first of April 1852, then cut back to one good eye, from which canes run the span of the house to the wall plate opposite (about 30 feet) before the period of



pruning in Autumn. The following season (1853) they were treated in the usual manner—suspended to the wires about the 10th of May and allowed to fruit five bunches each, all of which ripened and colored equal to any fruit exhibited in New York last autumn. The first bunches cut, were *Muscat blanc hatiff* and *Joslyn's St. Albans*, fully ripe the 5th of August, about sixteen months from planting; *Chasselas de Fontainebleau* or *Royal Muscadine*, and *White Frontignan* were cut the 10th of August; *Zinfindal*, *Decon's Superb*, *Xeres*, *Austrian Muscat*, and *Black Hamburg*, 25th to 28th of August; thence onward as later varieties matured, cutting the last—*Syrian* and *West's St. Peters*—the 27th of November.

Finding the vines this last spring in better condition than I expected, I decided upon pressing them for a larger yield, relying upon the excellence of the border, and selected ten bunches upon each vine as the most promising for weight. All others (perhaps thirty or forty on each plant) were removed. Their maturity has surpassed the preceeding year in size, color, and flavor, and the canes were better ripened, giving satisfactory evidence of unimpaired health. The different periods of ripening were earlier, notwithstanding the cold and rainy weather of spring retarded the swelling of the eyes, and the mercury also was down to 32° inside of the house on the night of the 16th April without any means of modifying the temperature yet; with these drawbacks the first bunches were cut, fully matured, on the 1st of August, which, allowing for the lateness of the spring, would be equal to the 20th or 25th of July in ordinary seasons. On the 5th of August I took from *Royal Muscadine*, *Muscat blanc hatiff*, *Joslyn's St. Albans*, and *White Frontignan*, about thirty bunches as perfect and fully ripe as I have ever seen, and ranging from one to one and a half pounds each. These varieties give only medium-sized clusters. On the 10th of August *Austrian Muscat*, *Zinfindal*, *Xeres* and *Decon's Superb* were fit for the table; and on the 15th of August I cut *Hamburgs* weighing 2 lbs. 15 oz. Between the 15th of August and 1st of September I cut about fifty bunches of *Hamburgs* averaging nearly 2 lbs. each. *White Tokay*, *Malvasia*, *Rose Chasselas*, and an occasional cluster of *Muscat Alexandria*, were cut daily from the 20th of August to the 1st of Sept. The latter variety is very uncertain in a cold house, for in twelve vines only four set their fruit evenly; but those four gave as full satisfaction as is ever realized in a house with artificial heat, and decidedly higher flavored. For those who are partial to a rich *musk* flavor, there is no Grape equaling it; but to have it in perfection, it should be allowed to hang until a full amber color and the berries slightly shriveled or *raisined*. On the 1st of September all the *Hamburgs* upon the roof wires were thoroughly colored (fully black), but those on columns, being more shaded, came in with *Reine de Nice*, *Prince Albert*, *Cambridge Botanic Garden*, *Syrian* and *West's St. Peters*—all late varieties; the two last were ripe the 15th of September, and are desirable as hanging well to the 1st of December. The *Reine de Nice*, as a fancy variety, is attractive in its showy clusters, and ripens by the 1st of October.

You observe I boast no *Hamburgs* weighing 6 or 7 lbs., or *Syrians* 15 to 20 lbs. to the cluster, yet I have produced more weight of fruit from each vine than if the whole strength had been devoted to a single cluster, as is the case when these enor-

mous bunches are produced. I preferred equalizing the sustenance so as to have ten good bunches of *Hamburgs* well shouldered, *black*, and fully developed berries, and averaging  $1\frac{1}{2}$  to 2 lbs., (although some exceeded 3 lbs.,) than pursuing the opposite course. The same, also, with the *Syrians*—the total weight of each vine bearing ten bunches, was more than 30 lbs., as some clusters were more than 5 lbs. each. The largest bunch of *Prince Albert* is worth looking at, and I hope will reach 5 lbs. This variety is not regarded with favor in our region, owing to its coarse, rank habits, and backwardness in fruiting; yet for an amateur collection, I would commend at least one vine. Some experienced cultivators contend it is part and parcel of the recently introduced *Barbarossa* foisted upon the public at \$2 and \$3 the plant. Of the truth of this I shall be able to judge another year, by fruiting the *new comer* in a warm house, although not in season, to save purchasers from paying an exorbitant price.

In conclusion, I am aware of being open to the charge of “over-cropping”—“that my vines will shew the effect hereafter”—and all that; but I have pursued this course to test the questions mooted for some time past, of what the vine will bear under high culture, at what periods fruit may be relied upon in cold graperies, and whether equally good can be produced *without* the aid of *carrien* fertilizers as *with* this offensive element. I contend it can; but should my two years’ experiments prove detrimental, I shall be as ready to acknowledge error, as, in the opposite sense, to proclaim success.

I merely add, that any one desirous of enjoying this luscious fruit in perfection, may realize the most satisfactory results by having a *tight* curvilinear house, at a cost of \$12 the running foot, (say 50 feet in length, for \$600,) which will be a tasteful appendage to any establishment. This, with a rich compost border, stinting neither quantity or quality of the material in its first construction, and with CHORLTON’S treatise upon *Exotic Grapes*, (the best practical work on the subject extant,) to be had of C. M. SAXTON, New York, as a guide, he cannot fail to reap full satisfaction in the investment.

Perhaps at some future day I may give my experience in a warm vinery, also of several hardy varieties for outside culture, now attracting attention. Both classes of Grapes (exotics and native) are worthy of more interest in culture, not only for pleasure but for profit, and I trust the day is not distant when every man residing in the country will be able to “sit under his own vine and fig tree.”

[We thank “AMATEUR” for the very explicit and satisfactory account he has given us of his grape-culture. He is evidently a man who enjoys it, and who has an eye to the most minute point of arrangement. We cannot hear from him too often. We apprehend that too many grape-growers strive too much for *size*. We see comparatively few well-colored *Black Hamburgs*; even in well-managed vineries they are very often *brown*. For our own part we prefer a bunch weighing  $1\frac{1}{2}$  to 2 lbs., a jet black and handsomely covered with bloom, to a bunch twice that weight imperfectly colored. Large supplies of water or liquid manure applied up to a late period in the season, added to a defective circulation of air, are, we believe, the chief causes which prevent Grapes from ripening perfectly and coloring well.—ED.]

# GREEN-HOUSE PLANTS FOR WINTER BOQUETS.

BY THOMAS MEEHAN, PHILADELPHIA, PA.

Your correspondent "QUERIST" "built last year a small green-house, with the view of having cut-flowers regularly through the winter, for a center-table." He "was very much disappointed, and, under present circumstances, wishes he had his eight hundred dollars back again." His case is a common one. Many will thank him for bringing it thus prominently forward; and I trust I shall not be the only one of your "practical correspondents" who will proffer him a helping hand, as the subject is so extensive, and at the same time so worthy of consideration, that the little we have been taught by experience only leads the wisest of us to understand how very much of it there is yet to learn.

In this article I confine myself entirely to plants adapted to form material for bouquets and baskets. They are in all cases such as I have myself used for this purpose, and all of them are easily to be had from most florists.

The spring of the year is the proper season to make arrangements for a stock of winter-blooming plants. I will suppose that we have nothing to commence with, and have to order a stock of green-house plants to form the nucleus of a permanent collection. I should select the following:

YELLOW.		Name.	Time of Flowering.
Acacia armata,	Feb. and March.	Epacris paludasa,	Feb. and March.
" verticillata,	" "	" nivalis,	Jan. and Feb.
" linearis,	" "	Eupatorium canescens,	Nov. to Jan.
" pubescens,	" "	Fabiana imbricata,	Feb. and March.
" pulchella,	" "	Jasminum grandiflorum,	Sept. to Dec.
Coronilla glauca,	Dec. to March.	*Jasminum azoricum,	" "
Jasminum revolutum,	" "	Primula sinensis, d'ble white,	Sept. to March.
" nudiflorum,	" "	Solanum jasminoides,	" "
Mahernia odorata,	Feb. and March.	Stevia serrata,	Oct. to Jan.
Cytisus racemosus,	Dec. to January.	Viburnum tinus,	Oct. to March.
ORANGE-COLORED.		Gardenia florida,	" "
*Abutilon striatum,	Oct. to April.	*Gardenia radicans,	" "
Cheiranthus Marshallii,	Dec. to Feb.	Spiraea prunifolia,	Feb. and March.
Chorizandra varium,	Nov. to March.	Deutzia gracilis,	" "
" cordata,	Jan. to March.	" scabra,	" "
*Cestrum aurantiacum,	Oct. to Feb.	Eupatorium elegans,	Dec. and Jan.
*Mannettia bicolor,	Oct. to March.	Sparmannia Africana,	Dec. to Feb.
*Lantana cracea,	" "	PINK AND PURPLISH.	
Tropaeolum Lobbianum,	" "	*Begonia incarnata,	Dec. to March.
WHITE.		Ribes sanguinea,	Feb. and March.
Alaysia citriodora,	Nov. to Feb.	Weigela rosea,	" "
Cyclamen Persicum,	Nov. to March.	Fuchsia serratifolia,	Jan. to March.
Daphne indica album,	Feb. and March.	Correa speciosissima,	" "
		Cyclamen Europeum,	Sept. to Dec.



<i>Name.</i>	<i>Time of Flowering.</i>	<i>Name.</i>	<i>Time of Flowering.</i>
<i>Cyclamen coum</i> ,	Dec. to Feb.	<i>Tropæolum azureum</i> ,	Nov. to Feb.
<i>Epacris impressa</i> ,	" "	<i>Veronica Andersonii</i> ,	Sept. to Dec.
* <i>Habrothamnus elegans</i> ,	Oct. to March.	SCARLET AND RED.	
* <i>Plumbago rosea</i> ,	Feb. and March.	* <i>Euphorbia jacquiniæflora</i> ,	Nov. to March.
<i>Polygala oppositifolia</i> ,	Jan. to March.	* <i>Poinsetta pulcherrima</i> ,	" "
<i>myrtifolia</i> ,	" "	<i>Cuphea platycentra</i> ,	Sept. to March.
<i>Primula sinensis</i> , d'ble purple,	Sept. to Dec.	<i>Bouvardia triphylla</i> ,	Sept. to Nov.
BLUE AND LILAC.		<i>leiantha</i> ,	Sept. to April.
* <i>Heliotropium Voltairaneum</i> ,	Sept. to April.	* <i>Epacris grandiflora</i> ,	March and Ap'l.
<i>Salvia patens</i> ,	Sept. to Dec.	<i>Hoitzia coccinea</i> ,	Feb. to April.
<i>Viola arborea</i> ,	Oct. to Feb.	* <i>Ruellia formosa</i> ,	Nov. to April.
<i>Neapolitana</i> ,	Dec. to Feb.	<i>Salvia splendens</i> ,	Oct. to Feb.
* <i>Pentas carnea</i> ,	Sept. to April.	* <i>Aphelandra Ghiesbrechtii</i> ,	Dec. and Feb.
<i>Ageratum cælestinum</i> ,	Oct. to Feb.	* <i>Geissomeria elegans</i> ,	" "
<i>Ceanothus rigidus</i> ,	March and Ap'l.	* <i>Hibiscus rosa sinensis</i> ,	Sept. to Feb.
<i>Neiremburgia gracilis</i> ,	Jan. to April.	<i>Russelia juncea</i> ,	Sept. to Nov.
<i>Plumbago capensis</i> ,	Sept. to April.	<i>Tropæolum tricolorum</i> ,	Jan. to April.

All of these will do perfectly well in a green-house. Those marked \*, do best kept a little warmer than the others. They are all of the easiest possible culture, and come into flower *between* the periods named—different modes and circumstances making a slight difference.

Having procured these plants early in the spring, we next proceed to their culture for our purposed object. The tuberous-rooted section, comprising *Tropæolums* and *Cyclamens*, will be nearly or quite out of flower, they will require but an occasional supply of water, say once or twice a week, till the leaves are decayed, when the pots containing the plants should be set on a shelf where they can be kept nearly dry till the end of August, when they may be taken out and replaced with fresh sandy loam in the same pots as before, watered sparingly until they have an abundance of foliage, then to receive an abundant supply.

Another class, comprising *Acacia*, *Cytisus*, *Chorizema*, *Daphne*, *Correa*, and *Polygala*,—if the pots are full of roots, as they often are on being received from a nursery, —should be shifted into pots a size larger, in a soil consisting for the most part of turfy loam, with a small quantity of turfy peat or half-rotten sticks, added to it. They will, of course, receive regular watering through the summer, and during the hot season be placed where for six hours or so, during midday, they can be protected from the sun.

The whole of the other plants may be turned out into a half-shaded border, which has previously been *deep dug* and *lightly manured*, till the end of August, when all but *Spiræa*, *Deutzia*, *Weigela*, *Ribes*, and, in short, all but deciduous shrubs, should be prepared for lifting into pots. This preparation consists in giving them a *thorough soaking* with water a few hours previous to taking them up, without which they will suffer materially under the operation. Put them in as small pots as possible, place them in a situation where they will get only the morning sun for some days, and during that time sprinkle them every few hours with water through a fine-rosed water

pot or syringe, and place them gradually in the full light as they seem able to bear it. They will "miss the change" but very slightly, and besides the requisite labor attending plants kept in pots the whole season, will be much better plants. The exceptions to the above (deciduous shrubs) are best left in the ground till their leaves are ready to fall, say about the end of September, as, if they are lifted before the wood is ripe, they seldom flower freely.

The plants should be all housed before the weather becomes even "white frosty," and at the return of spring, or, in this latitude, early in May, set out of doors a few days, then cut down as is usual with Geraniums, and afterwards planted out to grow, as in the previous season. When the plants turned out of doors have begun to grow, a few young shoots of each kind should be taken off and struck. Young plants thus raised will come into flower a few weeks after the old ones are gone out, and will besides come in useful to retain wherever the old ones grow too large.

Besides the plants I have above noted as permanent green-house plants, there are many special things that cannot be dispensed with. The *Camelias Double White*, *Candidissima myrtifolia*, and *Lady Hume's Blush*—are essential in a collection of boquet flowers; nor can *Azaleas indica alba*, *Phacelia*, and *Smithii*. These can be successfully grown with the other plants by giving them an open, turfy soil, well drained, and an abundance of water while growing, little when comparatively at rest, and *partially shaded* in summer time.

The *Horse Shoe* or *Scarlet Geraniums*, *Geranium Comptonianum*, the *Oak-leaved*, and *Rose-scented*, are essential ingredients in my ideas of a winter boquet; and in the spring of the year of the lighter colored *Cinerarias* and white and scarlet *Verbenas*. Cuttings of all these should be put in expressly for this purpose early in the summer and grown for a few months in the fall. *Mignonette* and *Phlox Drummondii* should also be sown in pots with these, for the same object.

The *Rose* must not be forgotten. For a small green-house, I would select the following kinds as blooming very freely under very common treatment—*Cels*, white; *Deconiensis*, pale lemon; *Madame Bosanquet*, creamy white; *Souvenir de Malmaison*, rosy white; *Caroline*, salmon white; *Lyonnais*, salmon; *Common Daily* or *Monthly China*, pink; *Hermosa*, rose; *Carmine Beam*, purplish rose; *Agripini* and *Louis Philippe*, crimson. Roses for blooming early in winter, should in all cases be turned out of their pots, and lifted in August, in the same manner as already described for a class of plants. When they are re-potted, a good proportion—say one-third—of coarse stable manure, with the turfy loam employed, will be of great service.

There are many other plants, and tribes of plants, which are indispensable to make a green-house gay in the fall, winter, and spring, as *Chrysanthemums*, *Cactuses*, *Hyalcinths*, *Lechenaultia*, *Pimelia*, &c. But I have thought it best to confine myself in this article strictly to your correspondent's object—"plants which will serve at once to adorn the green-house, and to cut for the centre-table."

[We thank Mr. MEEHAN for his prompt and excellent contribution to this department. We hope soon to acknowledge similar favors from others.—Ed.]

## WIND-MILL PUMPS.

BY J. P. KIRTLAND, EAST ROCKPORT, OHIO.

By reference to Vol. III (new series) of the *Horticulturist*, page 227, an article will be found on the "Application of Wind as a Power for raising Water." It was written for the sole purpose of attracting the attention of the public to a method of pumping water from wells by the aid of wind-mills, the feasibility of which I supposed had been fully demonstrated by the experience of Mr. ANDERSON, a respectable farmer, five miles south-west of Ashland, Ohio. My conclusions were not formed till I had visited his place, in two different years, seeing the machine at both times in successful operation, and obtaining from him minute details of his experience in regard to it. A short time since, an article appeared in the *Ohio Cultivator*, contradicting all the statements respecting the successful operation of Mr. ANDERSON'S machine, together with an expression of the editor's opinion that the whole plan was chimerical—or words to that effect. I immediately addressed a letter to BELA B. CLARK, M. D. of Ashland, with a request that he would obtain from Mr. ANDERSON, answers to the following queries, as well as all the facts which might have any bearing on the subject. Dr. C. has had the goodness to forward the following reply, with the answers to the several queries, all of which are here annexed:

"ASHLAND, SEPT. 11, 1854.

"J. P. KIRTLAND, M. D.—*Dear Sir*: I delayed an answer to yours, until I had seen Mr. ANDERSON, that I might give you reliable information. I have just seen him, and can assure you that he has the fullest confidence in the project.

"He says the crank ought to be short. His was so; and he thought it much better than a longer one. He also says that he has no doubt that it would be just the thing on the lake shore. It should be placed away from any building, or other obstruction to light breezes. His was too near his barn.

"Mr. A. has seen the remarks in the *Cultivator*, and he says that 'nothing can be further from the truth.' He took down his machine, not because it failed to answer the purpose, but because it was made by himself, of green lumber, and was not made right.

"The water in the well, where he placed the wind-mill, is only about seven feet from the surface of the ground; and as the surface descends about two feet to the rod, he now contemplates ditching from the well till he can bring the water above the ground, by which means he can have a running spring: otherwise he says that he should immediately put up another wind-mill, and he would have it made by a workman. B. B. CLARK."

QUERIES ANSWERED BY MR. ANDERSON.—Q. How many years did Mr. ANDERSON'S wind-mill pump continue in operation?

A. About four years.

Q. How frequently did it fail to operate from getting out of order?

A. It was seldom out of order—no more than a common pump.

Q. How many days, during the summer and autumn, did it fail to furnish a supply of water for his cattle, from a want of wind to keep the mill in operation?

A. Provided he had a large reservoir, it would never fail.



*Q.* Did it often suffer injury from violent gales of wind?

*A.* Never, at any time.

*Q.* Was it, on the whole, considered a successful, cheap, and reliable plan for watering a stock of cattle?

*A.* It was.

The above letter of Dr. C., and the answers of Mr. A., will suffice to put to rest the article which appeared in the *Cultivator*. It would be needless, in Ohio, to add that the statements of these two gentlemen do not admit of a doubt. I will only add that, of the numerous letters which I have received in regard to the machine, since the description of it appeared in the *Horticulturist*, nine-tenths of them have contained suggestions for improving and complicating the plan. Its simplicity is the surety for its success. Every proposed change would either increase the friction or the power,—the one would render a stronger wind necessary to set it in operation, while the other would result in racking the machinery.

Several have been constructed, and failed because the cranks had too much sweep, and the wheels were too large. The flange on the axle should be *only an inch and a half long*, allowing a play of *three inches*; and the diameter of the wheel should not exceed *four feet*. I would in no point vary it from the plan figured and described in my first article.

The present season has shown the want of such a machine on the premises of almost every individual who owns an acre of ground in our country, and it is a matter of surprize that our ingenious mechanics do not supply what the public stand ready to purchase.



## ARCHITECTURE—STYLES AND CHANGES.

A CORRESPONDENT requests us to give some remarks on the different styles of architecture, for the information of himself and others. In a letter now before us he says: "I am often puzzled, when reading articles on architecture, for want of some knowledge of the elementary principles. I often see buildings in which there appears to be want of symmetry, or adaptation of parts to each other—sad incongruity; and yet I am unable to tell where the defect is, or what would remedy it. I am afraid, if I should undertake to build myself, I should commit some great blunder. To be sure, you may say, get an architect. That is right; but every one who builds, should study the matter himself—certainly enough to understand the rudiments of the science. And then, some of us at the west, who wish to put up a cottage, or make an addition to a house already built, can not command the services of an architect."

To answer our correspondent, perhaps we can not do better than to quote pretty freely from *Repton's Landscape Gardening*. In this country we have very few purely Gothic, or even Grecian buildings. A glance at the annexed engraving will show that they are scarcely suited to human habitations, much less for private residences. Still,



Fig. 1. Imaginary composition, showing, in the background, the castellated Gothic style of architecture; next, the ecclesiastic Gothic; then, the mixed Gothic; next, the Grecian, or classical style; and, lastly, Indian architecture

all buildings of architectural pretensions partake somewhat of the character of one or the other, and it is well that the leading features of each should be understood.

**THE GOTHIC STYLE.**—The *Castle Character* requires massive walls, with very small windows, if any are allowed to appear externally. The correct imitation of this, in modern times, must produce the effect of a prison.

“The *Abbey Character* requires lofty and large apertures, almost equally inapplicable to a house, although, in some few rooms, the excess of light may be subdued by colored glass. But in the Abbey character it is only the chapel, the collegiate church, the hall, and the library, which furnish models for a palace; all the subordinate parts were the mean habitation of monks, or students, built on so small a scale, and with such low ceilings, that they can not be imitated in a modern palace, without such mixture and modification as tend to destroy the original character; therefore it is necessary now (as it was formerly) to adopt the *mixed style* of Queen Elizabeth’s Gothic, for modern palaces, if they must be in any style of what is called *Gothic*.

“Until the reign of Queen ELIZABETH, the large buildings in England had either been castles for security, or colleges and religious retreats. Many of these had been converted into palaces, or altered to adapt them to royal residences, by such changes in their original forms, as, at length, introduced that mixed character, called *Queen Elizabeth’s*, or *House Gothic*.

“Yet, a mixed style is generally imperfect: the mind is not easily reconciled to the combination of forms which it has been used to consider distinct, and at variance with each other: it feels an incongruity of character, like an anachronism in the confusion of dates: it is like uniting, in one object, infancy with old age, life with death, or things present with things past.

**THE GRECIAN STYLE.**—Under this character are included all buildings in England, for which models have been furnished from Greece, from Italy, from Syria, and from other countries, unmixed with the Gothic style; for in all these countries some intermixture of style and dates, in what is called the Grecian character, may be discovered: and we are apt to consider, as good specimens, those buildings in which the greatest simplicity prevails, or, in other words, those that are most free from mixture. Simplicity is not less necessary in the Gothic than in the Grecian style; yet it creates

great difficulty in its application to both, if no mixture of dates is to be allowed in the respective styles of each. Thus, the English antiquary will discover, and, perhaps, be offended at, the mixture of Saxon, Norman, and the several dates of subsequent buildings called Gothic; but the man of taste will discover beauty in the combination of different forms in one great pile, or he must turn with disgust from every cathedral and abbey in the kingdom. In like manner, the traveler and connoisseur in Grecian antiquities, will not only object to more than one of the five orders in the same buildings, but will detect the intermixture of even the minutest parts in detail; while the man of taste will discover beauty and grace in combination of forms, for which there is not authority in the early, and, therefore, most simple edifices of those countries. It is by such combinations only, that the Grecian style can be made applicable to the purposes of modern habitation.

"The best models of pure and simple Grecian architecture, were temples, many without a roof, and all without windows or chimneys. Such models might be imitated in our churches, or public edifices; but houses built from such models would become inconvenient, in proportion as this external simplicity is preserved. For this reason, INIGO JONES, and our early architects in the Grecian style, took their models from buildings of later date (chiefly Roman), where the different floors are marked by different orders placed one over another.

"As the taste for Grecian architecture became more correct, and, by the works of STUART and others, the more simple original models became better known in England, various attempts have been made to adopt it in modern houses; but a palace, or even a moderate sized residence, can not be entirely surrounded by a peristyle, like a Grecian temple; and, therefore, the portico alone has been generally adopted.\*

"THE MODERN STYLE.—The numerous difficulties in reconciling the internal convenience of a house to the external application of Grecian columns of any order, at length banished columns altogether, and introduced a new style, which is, strictly, of no character. This consists of a plain building, with rows of square windows at equal distances; and if to these be added a Grecian cornice, it is called a *Grecian building*: if, instead of the cornice, certain notches are cut in the top of the wall, it is called a *Gothic building*. Thus has the rage for simplicity, the dread of mixing dates, and the difficulty of adding ornament to utility, alike corrupted and exploded both the Grecian and the Gothic style in our modern buildings.

"Without a bigoted attachment to *either*, every one must confess that there are a thousand beauties and graces in *each*, which deserve our admiration, although they can not, without violence, be made subservient to modern residence.

"In this inquiry, no mention has yet been made of the difference of climate, and the influence it may be supposed to have on the different styles, because grace and beauty of form, in ornament and decorations, may be considered, without always

\* The difficulty of adapting any order of columns to the windows of a house, is evident from the portico being sometimes confined to the ground floor only, sometimes extended two, or even three, floors, and sometimes raised on a basement of arches, unknown to the Grecian character. A more classic expedient has been devised by the ingenious author of the *Antiquities of Grecia Magna*, in his designs for Harford and Downham colleges; but such lofty portion of windows, though allowable in a public building, would be inapplicable to the purposes of a private house.



annealing ideas of utility ; if they can be blended, it is the perfection of art in every province ; and, in the choice and adaptation of new forms to new uses, consists the genius of the artist.

“But there is another consideration of greater importance, which relates to the *material* of which the building is constructed.

“The *eye* will not be pleased with *that* to which the *mind* can not be reconciled : we must be satisfied that the construction is safe, and that the material is equal to its office. The resistance of iron is greater than that of stone ; but if iron columns be made to represent stone, they will appear too light and weak. On the contrary, if stone columns be made to resemble metal, they will appear too heavy and massive. And if either of those materials be made to imitate wood, not only the relative strength of each must be considered, but also the *Principles of Construction*, which are totally different in the Grecian and Gothic styles.\*



Fig. 2. Sketch exhibiting the principles of pressure in Grecian, Gothic, and Indian architecture.

“OF GRECIAN CONSTRUCTION.—According to the law of gravitation, all matter at rest keeps its place by its own weight, and is only to be removed by superior force acting in a different direction. A perpendicular rock, or a solid upright wall, will preserve the same position so long as its substance endures. On this principle of perpendicular pressure all

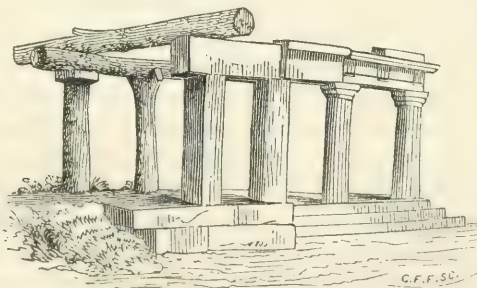


Fig. 3. Sketch exhibiting the progress of Grecian architecture, from the columns and beams formed of the trunks of trees, with the bark on, to the Doric order, with fluted shafts, &c.

Grecian architecture is founded. Hence have arisen the relative proportions and intercolumniations in the different orders, from the heaviest Doric to the most graceful Corinthian, the distances being regulated by the strength of the parts supporting and supported.

\* This remark is every day confirmed by the too slender groins of Gothic arches, to imitate stone, in plaster, or cast iron, and the too slender columns of Grecian architecture in wood, painted to imitate stone and marble.

"Although it is probable that the first buildings were of wood, and that rude trees suggested the proportions of the Doric order, yet, the origin of Grecian architecture was, doubtless, derived from one stone laid flat upon another, and the aperture, or void, between two upright stones, was covered by a third placed across them: thus the width of the opening was limited by the length of the cross-stone; consequently, this mode of structure required large blocks of stone, when that material was used [see fig. 3].

"The difficulty of procuring such large blocks as were required for this mode of construction, suggested the idea of producing wide apertures by a different expedient; and this introduced the arch.



Fig. 4. Sketch exhibiting the principle of forming abutments for Gothic arches, as generally adopted in ecclesiastical buildings.

"OF GOTHIC CONSTRUCTION.—In every arch, whether a segment of a circle, an ellipsis, or in the pointed arches, called Gothic, there is a great lateral pressure. This constitutes the leading principle of construction in Gothic architecture, which depends on its abutments [see fig. 2]. An arch may sometimes abut against a rock, as in bridges; or against a pier of masonry, as in castles, &c.; but, in light Gothic structures, the abutments consist of buttresses to counteract the lateral pressure; and where such buttresses are not sufficiently heavy, additional weight is used under the various forms of pinnacles, or finials, which have often been mistaken for mere ornaments, of no use in the construction; and these are

sometimes placed at a distance, when they are connected by what are called flying buttresses, like those at Henry the Seventh's chapel [see fig. 4].

"OF INDIAN CONSTRUCTION.—Under the name of *Indian Architecture*, may be included Hindūstan, Gentoo, Chinese, or Turkish; which latter is a mixture of the other three. But this construction is distinct from the Gothic, in having little or no lateral pressure; and from the Grecian, in having a different mode of applying the perpendicular pressure; for although, at the first sight, we might be led to suppose the arches constructed on a center, like those of Europe, yet, on a closer examination, they will be found to consist of horizontal strata, supported by what is technically called '*corbelling out*,' or placing the materials in such a position that the aperture may be larger at the bottom than the top, by each stratum of stone overhanging the other [see fig. 2]. From the specimens discovered in the Indian excavations, there is no doubt but the original idea was taken from those subterraneous caves or grottos.

"The people who formed these awful wonders of antiquity, instead of erecting buildings on the surface of the ground, began their operations by cutting away the foundation of a rock, to obtain room below, without endangering the superstructure

and thus, by degrees, the Indian architecture seems to have grown from the rudest excavations of Troglodite savages, to the most beautiful forms discovered in the temples of Salsetta, of Elora, and Elephantis.

"When these natural subterraneous vaults were imitated above ground, in buildings of later date, the same construction prevailed; and, therefore, both in the arches and domes of the Indian style, we observe the same principle of perpendicular pressure [see fig. 5.]

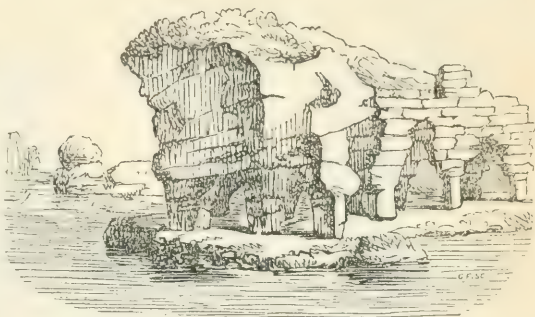


Fig. 5. Imaginary sketch, exhibiting the principle of perpendicular pressure in the artificial vaults made in the native rock in India, and also in the arches of buildings in the Indian style.

"APPLICATION OF INDIAN ARCHITECTURE. — Having already shown the difficulty of adapting either the Grecian or Gothic styles to the character of an English residence, this newly discovered style of architecture seems to present a new expedient for the purpose, in the forms made known to this country by the accurate designs of Mr. THOMAS DANIELL, and other artists, which have opened new sources of grace and beauty.

"To the materials of wood and stone we have lately added that of cast-iron, unknown in former times, either in Grecian or Gothic architecture, and which is peculiarly adapted to some light parts of the Indian style.

"In Grecian architecture, the artist is confined to five (or, rather, only to three) different orders of columns, so restricted in their relative proportions that they are seldom used externally, with good effect, in modern houses, and are generally found too bulky for internal use. Indian architecture presents an endless variety of forms and proportions of pillars, from the ponderous supports of the cavern, to the light, airy shafts which enrich their corridors, or support their verandas. This alone would justify the attempt to adapt a style, untried, for the purpose to which other styles have been found inapplicable or inadequate.

"It is difficult for an artist at once to divest himself of forms he has long studied. This will account for the confusion of Grecian and Gothic in the works of JOHN OF PADUA, INIGO JONES, and others, about the same date, which occasioned that mixture of style, condemned in after-times for the reasons already assigned. The same thing may be observed in the first introduction of Gothic, mixed with the Saxon and Norman which preceded it: and the same will, doubtless, happen in many instances, during the introductory application of Indian architecture to English uses, while a false taste will both admire and condemn, without any true standard, the various forms of novelty.

"If I might humbly venture to suggest an opinion on the subject, I should recommend the use only of such Indian forms, or proportions, as bear the least resemblance



to those either of the Grecian or Gothic style, with which they are liable to be compared. If the pillars resemble Grecian columns [compare fig. 6 with fig. 7], or if the apertures resemble Gothic arches, they will offend, by seeming to be incorrect speci-

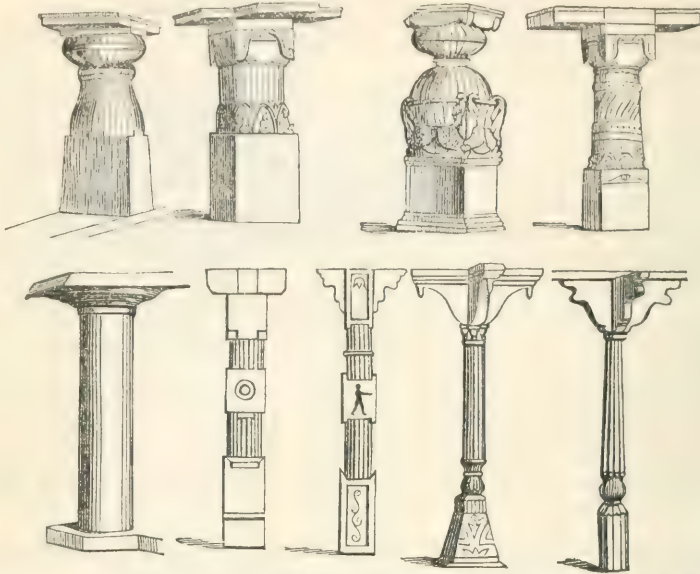


Fig. 6. From an endless variety of columns used in Hindoo architecture, the above few examples are inserted, that their relative proportions may be compared or contrasted with those of the orders to which Grecian architecture is necessarily confined.

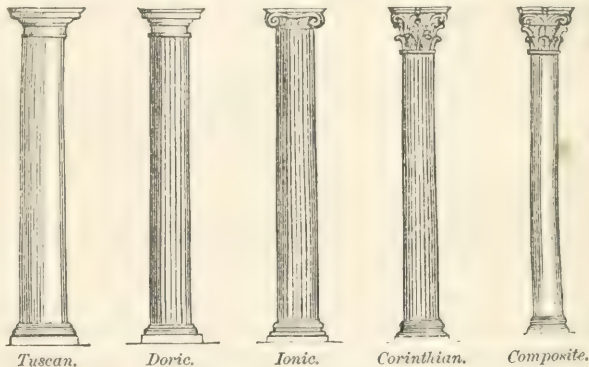
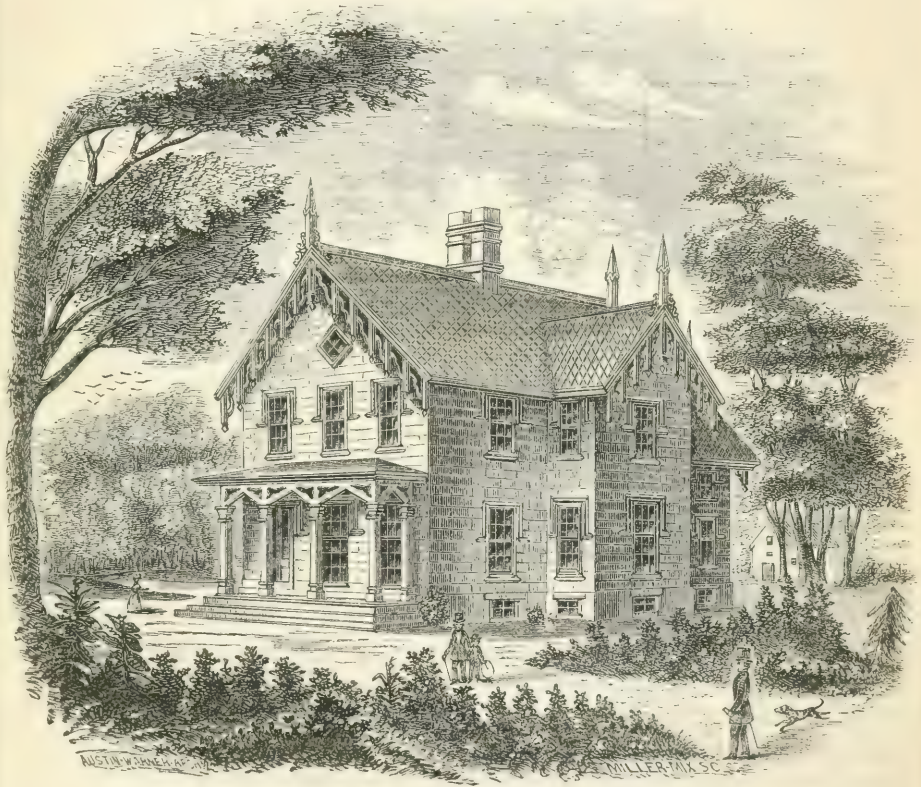


Fig. 7. Specimens of columns of the different orders of Grecian architecture, given with a view of facilitating the comparison between them and the Hindoo buildings.

mens of well-known forms, and create a mixed style, as disgusting to the classic observer as the mixture in Queen Elizabeth's Gothic. But if, from the best models of Indian structures, such parts only be selected as can not be compared with any known style of English buildings, even those whom novelty can not delight, will have little

cause to regret the introduction of new beauties. Without strictly copying either the mosques, or the mausoleums, or the *serais*, or the hill-forts, or the excavations of the east, the most varied and graceful forms should be selected, with such combinations, or even occasional deviations and improvement, as the general character and principles of construction will admit; for which purpose the specimens [see figs. 6 and 7] are submitted for consideration as general hints, rather than as finished designs.

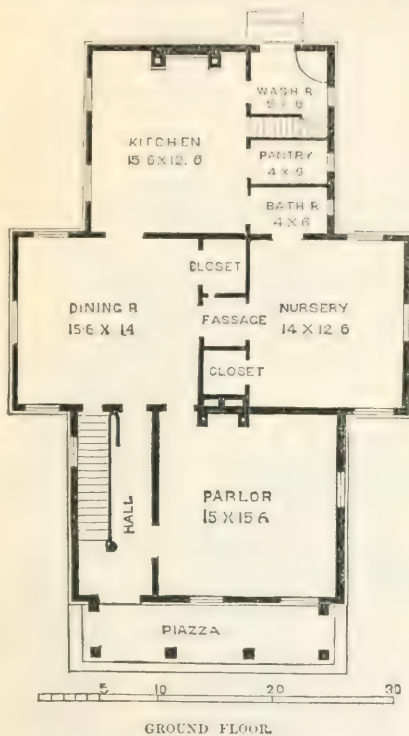


### A SYMMETRICAL COTTAGE.

BY AUSTIN & WARNER, ROCHESTER.

WHOEVER loves symmetry and the simpler kinds of cottage beauty, including good proportion, tasteful forms, and chasteness of ornament, we think can not but like this design, since it unites all these requisites. It is an illustration of a cottage made ornamental at a very trifling expense, and without sacrificing truthfulness to that kind of tasteful simplicity which is the true touchstone of cottage beauty.

This cottage is entered by means of an ample hall, off which is the parlor, 15 ft. by 15 ft. 6 in. The dining and living room is entered from either the hall or parlor, and is 15 ft. 6 in. by 14 ft., having closets, also a closet under stairs. Adjacent to the dining-room is the nursery, 14 ft. by 12 ft. 6 in., having a bathing-room and closet.



Off of dining room is the kitchen, 15 ft. 6 in. by 12 ft. 6 in., having an ample pantry, sink room, &c. The back stairs ascend from the sink-room, which is a great convenience, as slops, &c., from the second story can be brought down these stairs without being seen from any of the principal rooms. Entrance to the cellar from the kitchen. In the hall is the principal stairs leading to second story, which is divided into bed-rooms having closets attached; also inclosed stairs to attic, in which there are three large sleeping-rooms, with store-rooms, &c. The little front room in second story would make a bed-room if required, or a dressing room attached to the large front bed-room.

First story 9 ft. 6 in. high, second story 8 ft. high. The superstructure is framed, sheathed on the outside with 1 1/4 in. boards about 9 in. wide, put on horizontally, and rebated to imitate block work, and painted three good coats, the last two to be sanded; thus making the building appear like a stone one, with very little expense. To be plastered on the inside two coats (browning and white finish). The inside finish is to be plain and neat. Architraves in principal story to be 7 in. wide, bevelled bands those in the second story, 6 in. The building finished complete, will cost about \$2,000.



## Foreign Notices.

EFFECTS OF WINTER ON CONIFERS.—The last winter has enabled us to judge more correctly than before of the effects of as low a temperature as we usually experience, even in extreme cases, upon most of the newly introduced trees and shrubs. From information communicated to the *Gardeners' Chronicle*, and from several other sources, the Horticultural Society have been able to cause an instructive return to be prepared, which is published in the number of their journal just out. It is needless to say that this is a subject of the highest interest in the innumerable lovers of "hardy" plants, who spend large sums of money upon their acquisition, and who are greatly annoyed when the assurances that they have received of a costly plant being certainly quite hardy, prove to be fallacious. To be hardy, in the proper sense of the word, a tree must be able to bear not only our ordinary winters, which are remarkable only for their mildness, but those instances of much lower temperature which are certain to occur every ten or fifteen years, and of which we have no previous warning.

The question of hardiness is by no means easy to determine conclusively. Mere identity of temperature does not indicate identity of climates; the thermometer may fall to zero in two places, of which one has a warm, dry, well drained soil, the other a cold, damp, heavy soil, and plants will escape in the first which perish in the last. A great variety of analogous circumstances, unobserved, and perhaps inappreciable, assist in complicating the matter, so that, for absolute exactness, each species of tree would require to be made the subject of a dissertation. But life is too short for us to wait for elaborate inquiries, and we must be satisfied with such an approximation to truth as can be readily obtained. The most satisfactory way of arriving at such truth is by obtaining returns from many different places, in different situations, and comparing the evidence relating to each new species with that collected in the same places concerning well-known plants now familiar in all gardens. To say that a species will bear an ordinary winter is too vague an assertion to be useful. To say that it is as hardy as an evergreen Oak or a Sweet Bay, or a common Laurel, is intelligible to every one. The memoranda published by the Horticultural Society furnish data for such a comparison, which every reader can make for himself. Our limited space only enables us to give the result of the inquiry as regards a few of the more interesting cases.

Among the true Pines it may be regarded as certain that in all places, except the warm south and south-western districts, the following are too tender to be worth planting, viz: *Deconiana*, *Grenvillea*, *filifolia*, *leiphylla*, *apulensis*, *Hartwegi*, *patula*, *Tecote*, *Russelliana*, *canariensis*, *Masoniana*, *Winchesteriana*, *Gordoniana*, *halapensis*, *sinensis*, *Orizaba*, *occidentalis*, and *pseudo-strobus*. On the other hand, the hardy constitution of the following seems to be established, viz: *Llaveana*, *Gerardiana*, *tuberculata*, *palustris*, *radiata*, *macrocarpa*, *Benthamiana*, *Lindleyana*, *Fremontiana*, *muricata*, *Montezuma*, *Ayacuahute*, *combroides*, *osteosperma*, *Peuce*, *persica*, and *Brudia*. With regard to *P. insignis* the evidence is conflicting; there is a circumstance, indeed, within our own knowledge which is inexplicable; in the garden of the Horticultural Society were two good sized specimens, one rather younger than the other; the former sheltered partially by a wall, the latter as much or more sheltered by a conservatory; the younger died, the older sustained no injury: so again at Congleton, some are returned killed, others as having escaped; at Ossington, where the Sweet Bays perished, this plant was uninjured, and it is returned by Mr. Lowe, of Nottingham, where the frost was more intense than elsewhere, as being merely "injured." We incline to regard the plant as hardy after it is eight or nine years old.

Of Spruces the following seem hardy, viz: *Abies Smithiana*, *Morinda*, *orientalis*, and all the Oregon kinds; but *A. Brunoniana* is undoubtedly tender.

Among Silvers and their allies, *Abies Pinsapo*, *Webbiana*, *jzoensis*, *cephalonica*, *Nordmanniana*, and *Pichta* are hardy; on the contrary, *A. religiosa* will not stand.

All Larches except *Griffithi* seem to be hardy.

The *Cedar of Lebanon* represents sufficiently the constitution of other Cedars; the reports respecting the Deodar are much the same; in both cases plants have died, or suffered, or escaped. Practically we may regard the Deodar when old and well established, quite as hardy as the Cedar of Lebanon; when young it grows so fast as to be more susceptible of very severe spring frosts. Thus when the thermometer fell to 18°, on the 24th of last April, the young Deodars were in full growth in Mr. GLENDINNING'S nursery, at Turnham Green, and nearly all perished. The young wood of the common Walnut was killed at the same time.

Among Cypresses, *Cupressus funebris* appears to be unsuited to Nottinghamshire and the counties to the North, probably because it has not summer heat enough; the same may be inferred of *C. Ubi-ana*, *Goneniana*, *torulosa* and *thurifera*; *C. macrocarpa* appears to be more hardy, for no plant was quite killed even at Ossington, and at Oulton it sustained little injury. On the other hand it is returned by Sir OSWALD MOSLEY among his killed. We have some hope that all these Cypresses will become harder as the specimens acquire age; while young they grow so fast and so late as to be peculiarly susceptible of cold.

The returns relating to Junipers show how little they are cultivated. It, however, appears certain that *J. excelsa*, *squamata*, *recurva*, *chinensis*, *japonica*, and *mexicana* are hardy; and *Bermudiana*, *tetragona*, and *Bedfordiana* unmistakably tender.

Among other Coniferous plants, *Araucaria imbricata* has suffered far more than was expected, and evidently will not bear the climate of Derbyshire, and the bordering counties; this is a very unexpected result; it seems also to be ascertained that in a climate that suits it, it will bear well exposure to the sea, a quality of which those who live on the coast, where there is no chalk, will do well to avail themselves. The other *Araucarias* are not worth further trial. All species of *Callitris* are tender. All the *Cephalotaxi* are as hardy as Yews; a great discovery, considering how handsome these evergreens are. *Cryptomerias*, when in health, suffer nothing; even the fine variety *Lobbi*, obtained from the Dutch Botanic Garden at Buitenzorg in Java, was untouched so far north as Cheshire; but unhealthy specimens were turned brown in many places. Concerning *Cunninghamia* we have no northern evidence; up to the latitude of London it may be regarded as about as hardy as a Sweet Bay or *Magnolia grandiflora*. *Dacrydiums*, *Phylloclades* and *Dammars* are not worth further trial. Of *Fitzroya* we have the following account: "Not injured, *Chiswick*; cut back to the main stem, but recovering, *Acton Green*; not affected during the winter, *Bagshot*; stood well, not being injured in the least, *Ware*; leader killed down — supposed to be hardy, *Alton*; unhurt, *Rolleston*; escaped with slight injury, *Congleton*; not hurt, *Exeter*; uninjured, *Singleton*; under south-east wall, leader killed about 5 or 6 inches, *Southampton*; slightly protected, uninjured, *Bicton*;" we therefore regard it as hardy, the injury it sustained being probably caused by the youth and rapid growth of the specimens. *Glyptostrobus* is hardy. *Libocedrus chilensis* is an unanticipated addition to hardy Conifers; it seems to be undoubtedly as hardy as a Chinese *Arbor Vitæ*. Concerning the *Podocarps* all remains uncertain; they are worth further trial. *Retinisporas* seem to be tender. Of *Saxo-Gothaea* the reports are contradictory; the following is the return concerning it: — "Is scarcely alive, but not quite killed, although hopeless, *Chiswick*; cut back to the main stem, but recovering, *Acton Green*; not affected during the winter, *Bagshot*; stood well, not being injured in the least, *Ware*; perfectly hardy, *Alton*; unhurt, *Rolleston*; escaped with slight injury, *Congleton*; not hurt, *Exeter*; uninjured, *Singleton*; promises to prove as hardy as any of the Yews, *Bicton*." We hope the *Bicton* judgment will be confirmed; we know that the plant which died at *Chiswick* was out of health; and that the specimen at *Acton Green*, although it had grown very fast and failed to ripen its wood, exhibited no sign of suffering till the thermometer fell to 4°, and was succeeded by a bright morning sun. *Toxodium sempervirens* must receive a verdict of hardy, although its leaves and young shoots were nipped and turned brown; the common Yew was as much hurt in some places, especially plants transplanted in the previous autumn. *Thujas*, all hardy. About *Torreya nucifera* there is but one return, from Hampshire, and that is favorable.—*Gard. Chron.*

PALACE GARDENS, HAMPTON COURT.—In no previous season do we recollect having seen these in better condition than they are at present; and that their noble avenues, broad gravel walks closely shaven verdant lawns, and shady retreats, are appreciated by the public, is evident from the number of visitors who daily frequent them. The flower beds are just now at their best; among them are famous masses of *Lee's floribunda*, *integrifolia*, and *amplexicaulis* *Calceolarias*; *Mountain of Light*, *Flower of the Day*, *Tom Thumb*, *Frogmore*, and *Fair Helen* *Geraniums*; the variegated and blue Mexican *Ageratums*; the *Globe*, *Riccarton*, and *Carolina* *Fuchsias*; the dwarf purple flowered *Dahila zelinda*, which, when grown on poor soil, does not rise above a foot in height, and is very pretty; variegated *Alyssum*, quite a compact mass of snow blossom; together with beds of Robinson's *Defiance* *Verbena* mixed with Mangles' variegated *Geranium*; charming clumps of Clove *Carnations*, and of *Rosa Devoniensis*. The latter is found to bloom beautifully here every season, and is much admired, as is also the *Souvenir de Malmaison*. Surrounding the lawn are several fine pillar *Roses*, which, when in bloom, are striking and handsome. They vary from 12 to 15 feet in height. The sorts are *Brennus*, *Chénédélé*, *Coupe d'Hebe*, *Lamarque*, *Duchess of Sutherland*, *Madame Laffay*, *Fulgens*, *Mrs. Elliot*, and *William Jesse*, &c. The wall along the side of the broad walk from the "Flower-pot Gate" to the river, is covered with *Roses*, *Honeysuckles*, *Chimonanthus*, *Ceanothuses*, *Magnolias*, *Jasmines*, and *Clematises*, &c. These are not so trimly trained as to render them stiff and formal; but are allowed such freedom of growth as gives them a luxuriant and graceful appearance. In the "fountain court" the basin is encircled with large scarlet *Geraniums* in pots, consisting of *Tom Thumb*, *Flower of the Day*, and standard *Fuchsias*, which give to this quiet square a gaiety which it never before possessed. The way in which Mr. NEIL, who is gardener here, winter these specimens is as follows:—As soon as frost sets in he packs them closely together in a cold frame, and keeps them perfectly dry till spring, when he fresh pots them, and places them in a gentle heat, in which they push rapidly and soon come into flower, and continue so all the season.

As regards the walks, they are in beautiful order—a condition in which they are maintained by means of boiling salt water applied to them, as often as they require it, from a machine something like that employed for the same purpose by Mr. FLEMING. It is an oval copper cylinder encased (except the top) in iron, so as to have a flue all round it; it holds about 37 gallons of water, which is kept boiling by means of a furnace below, and it is spread over the walks from a perforated pipe like that attached to carts for watering streets. It is set on low broad wheels and is easily drawn by a couple of men, and all admit that its working and efficiency are most satisfactory. It was made, we were informed, in Kingston, from a plan furnished by Mr. NEIL, and cost about 20*l*.

The large Vine has upwards of 1600 bunches of Grapes on it this season, and appears to be in excellent health. A new greenhouse, aerated by means of Moore's patent ventilators, has lately been put up for the accommodation of tender plants in winter, and we observed that the gold and silver fish pond and canal have been cleaned and otherwise put in good condition.—*Garden Chronicle*.

CALYPTRARIA HEMANTHA, *Planchon and Linden*.—"This is by far the finest *Melastomad* which has ever been brought to Europe, not even excepting the *Medinilla magnifica*. The figure in the '*Flore des Serres*' will enable the reader to judge of the merits of the plant, without rendering it necessary to speak of the size and abundance of its brilliant flowers, or of the blood-red color to which it owes its native name of *Sangre de toro* (Bull's blood.) It is a bushy freely flowering shrub, with a rusty down all over its branches, petioles, peduncles, pedicels, calyx, and the lower surface of the leaves. The leaves themselves are extremely thick and coriaceous, and are remarkable for their beautifully reticulated nerves. The racemes of flowers are as much as 2 feet in length, and bear each 15 or 20 flowers, with fleshy persistent petals, and a calyx opening into the shape of a soap-box.

"It was discovered in 1847 by Mr. SCHUM upon the far-famed Paramo de Caehiri, and has again been met with by the same traveller in the province of Ocaña, whence he has sent home both suckers and seeds. It grows in a clay soil, at a height of from 5000 to 7000 feet, and in



company with several other beautiful plants which have also reached us, and to which we hope shortly to draw attention. Among them are *Purdica nutans*, with gracefully bending spikes of white bracts and delicate pink flowers; *Gonocalyx pulcher*, a pretty little shrub with thick fleshy nearly orbicular leaves, and numerous bright red tubular flowers; *Clethra consimilis*, with leaves like *Vaccinium*, and pretty white corymbose flowers; several magnificent *Bejarias*; the pretty *Begonia miniata*, introduced last year, and already known for the ease and abundance with which it flowers; and lastly, several very fine species of *Lisianthus*, which we succeeded in raising from seed, but which afterwards died in spite of our utmost care."—*Linden's Catalogue*, 1854.

There is a specimen of this in our herbarium, from Mr. LINDEN, which enables us to verify the exactness of the foregoing account to a great extent. The figures in the *Flore des Serres* represents it as being one of the most glorious of plants. It is said to hold its petals, contrary to the habit of *Melastomads*, and if so, it will far eclipse every crimson flowered species in cultivation. For exhibiting it will rank with Indian Azaleas or crimson *Rhododendrons*. The high price at which it is about to be "let out," viz, 50 fr. each, shows what a value is put upon it by its spirited importer.

Among *Melastomads* the genus is remarkable for having the operculate calyx of an *Eucalyptus*, but buried in ferruginous felt.—*Gard. Chron.*

WINTERING VERBENAS.—Having succeeded in keeping the different sorts of *Verbenas* in small pots through the winter, when my neighbors have failed, I beg to state the method I adopt. In the first or second week in July, I strike in 3-inch pots as many cuttings of the different kinds as I require for filling the beds in the following year, about six pots of a sort being sufficient. Early in August, the pots being filled with roots, I prepare as many boxes, two feet square, as I have sorts, filling one-third of each box with broken tiles, and the rest with one part sand, one leaf mould, and two parts good rich loam. The plants are then placed in them at equal distances apart, and the shoots being pegged down they soon take root all over the box, and form one mass. The boxes are placed in a cold frame during the winter, and the lights are thrown off, except in wet or frosty weather. Early in the spring they begin to make young shoots, which I pot in 3 inch pots, and strike in a Cucumber frame; these will be ready to plant out by the end of April, at which time the boxes are turned out, one side being removed, and the mass planted in the centre of a bed. The bed is then filled up with the young plants from the 3-inch pots; those out of the boxes, being oldest and strongest, take the lead and keep it; thus the plants in the centre of the bed, being the highest, a striking effect is produced.—*G. F., Gard. Chron.*

BEGONIA OPULIFLORA.—*Putzeys*.—"This remarkable species is as beautiful as any of the genus, and will no doubt become a favorite among the many persons who admire this interesting family. Some notion of the plant may be obtained by imagining a small bush with thick shining leaves, covered with heads of flowers looking something like those of the common Gueldres Rose (*Ibernum opulus*), but of a more delicate texture and of a much purer white, and forming an admirable background to golden yellow stamens. The species was discovered by M. SCHLIM in the cold regions of the province of Soto (New Grenada.) Price 15 fr."—*Linden's Catalogue*, 1854.

We know nothing of this, but it seems to be a desirable acquisition.—*Gard. Chron.*

## Editor's Table.

THE CONCORD GRAPE.—Numerous correspondents write as that they were disappointed at not finding an expression of our opinion of this fruit, in the October number. We will give it now. It was presented, in large quantities, before the Pomological Society at Boston, and since then we have been able to examine it carefully at home, Mr. BULL having politely sent us a box of them. It is a large, handsome Grape, both bunch and berry resembling the *Isabella* in appearance, save that the bunch is usually more compact and the berry rounder and has a thicker coat of bloom. It has the same foxy perfume and flavor of the *Isabella*, but stronger; when a few berries are eaten, a prickling sensation is produced on the tongue. This has been remarked by all who have tested it, as far as we know. It is very juicy, and we think will prove to be an excellent wine grape. For the table, however, we do not consider it equal in quality to the *Isabella*; and in this opinion nearly all disinterested parties, whom we have conversed with, agree. It was tested and compared with the *Isabella*, at Boston, grown at Weston, not far from Concord; and not one on the committee considered it as good. We have again compared it with *Isabellas* grown here, and the latter has been unanimously pronounced superior.

Yet we regard the Grape as an important acquisition, as ripening earlier than either the *Catawba* or *Isabella*, and therefore likely to furnish northern sections with a Grape, where heretofore no good Grapes have ripened. It may be two weeks earlier than the *Isabella*, but not more, we think; for ripe *Isabellas*, fully ripe and excellent, grown within ten miles or less of Concord, were shown beside it at Boston. The location, however, must have been a very favorable one; for most people seemed surprised to see it ripe so early, and some, Mr. HOVEY included, asserted very positively that they were not *Isabellas* but veritable *Concords*. Mr. HOVEY adhered to this opinion, we believe, until he went out to Weston and examined the vine from which the *Isabellas* were gathered. From this one would suppose that there is a great similarity between the two Grapes; and so there is; but the form and flavor are both different, as we have already said, and the canes of the *Concord* are much more slender than those of the *Isabella*.

We believe the merits of this Grape have been exaggerated. It has been described as being "free from all pulp," and of a very rich and luscious flavor. Mr. BULL himself, however, described it as having "very little pulp," which is nearer the truth. We think it will, with the same treatment, be about the size of the *Isabella*. It appears to have a vigorous constitution, likely to escape mildew and other diseases to a great extent; and this is a very important quality. On the whole, we congratulate Mr. BULL on his successful attempt at raising seedling Grapes; it affords him ample encouragement to continue his labors in this direction.

THE *Flore des Serres* for September last, has a plate of the *Maranta Warscewiczii*, a Central American species, with magnificent foliage, beautifully variegated, like the well-known *M. Zebrina*. The *Cissus discolor* proves to be a great acquisition to this class of variegated-leaved plants. A very interesting and beautiful collection might now be made.

NEW ROSES.—The English "*Florist, Fruitist*," &c., for October, gives a colored drawing of the new hybrid perpetual Rose "*Duchess of Norfolk*," which was originated by MARGOTTIN, of Paris, and is to be sent out by Messrs. Wood & Sox, well known English Rose growers. They offer it now for *half a guinea* a plant. The flower is described as "a bright crimson, with a shade of pink on the under side of the petal." A strong grower, remarkably free from thorns, with large, handsome, glaucous foliage, and blooms freely. Messrs. Wood & Sox characterize it "*a brilliant colored climbing Hybrid Perpetual Rose*." The term climbing is merely an exaggeration of its vigorous growth. Mr. RIVERS says, in the same number of the *Florist*, "it will probably form a nice Pillar Rose." "*Robert Burns*" was introduced in the same way as "climbing Hybrid Perpetual," but was found to be merely a free-growing sort that made long shoots. The public are greatly imposed upon by exaggerated descriptions of new things. Advertising new plants and flowers has got to be nearly or quite as bad as advertising quack medicines. The evil is a growing one in this country, and it would be well if some effective check could be given it at once; this, however, we are inclined to regard as an impossibility.

ISABELLA GRAPES.—E. A. MCKAY, Esq., of Naples, informs us that he has gathered 8,000 pounds of Grapes from an acre of vines, 6,000 pounds of which are marketable and fine. We acknowledged a sample of them, in our last number. Most of them are sold in the Canadian cities. A New York hotel offered fifteen cents per pound for the whole crop, to be delivered at intervals during the winter; but Mr. MCKAY preferred disposing of them in the fall.

Speaking of New York hotels, reminds us of their shabby fruit desserts. At the very best, where \$2.50 per day is charged, one can not find a *good* Pear or a *good* bunch of Grapes on the table. Those who want such things must go to TAYLOR'S or THOMPSON'S, and *pay* for them. Our hotel accommodations generally are good enough; but in the matter of fruit desserts, there is ample scope for improvement. Which of them will take the lead?

PEARS FROM MICHIGAN.—Our correspondent, Dr. D. K. UNDERWOOD, of Adrian, Mich., sends us specimens of *White Doyenne* and *Winter Nelis* Pears, as fine as any we have seen this season, and the latter variety are as large and fine as we have ever seen them grown any where; they measured over eight and a quarter inches in circumference, and of the highest quality—Michigan is to be a great fruit growing State—gentlemen who have traveled there lately, to buy apples for Illinois, speak in the highest terms of the size and beauty of the Apple, of the health, vigor, and productiveness of the trees. We take it as a great favor thus to be furnished with specimens from different localities. It is the true way to accumulate pomological knowledge for the benefit of the country.

THE FLEMISH BEAUTY PEAR ON QUINCE.—It is somewhat remarkable that the *Flemish Beauty* is sometimes a total failure on the Quince, and at others succeed perfectly well. We saw recently a considerable number of very beautiful young trees of it in the nursery of Mr. MENAND, on the Troy Road, near Albany; and Mr. M. informed us that he had not failed with it in a single instance. We take pleasure in stating, in this connection, that Mr. M.'s little collection of dwarf Pears are all beautiful, showing the same skillful culture and training which distinguish his pot-plants. "A little ground well tilled," is MENAND'S maxim. We are glad to see him turn a share of his attention to hardy trees.



ANOTHER "IMPORTANT SECRET" IN CULTIVATION.—Professor "Terra-Culture" COMSTOCK thought, or pretended to think, that he made a great discovery in the art of culture, and modestly demanded from the State, or the nation several thousands of dollars, as a reward. For a long time he made himself and every one he met unhappy about it, until at length the New York State Agricultural Society appointed a committee to examine into the thing. We do not know that the committee reported, but we know that the chairman of it regarded the whole matter as sheer nonsense;—and so it was. The State would do nothing for the Professor, and so he took to lecturing; and the last we heard of him, he was in Wisconsin. Poor COMSTOCK! people hereabout said he was mad; and it may be he was, and is.

Our friend ISAAC HILDRETH, formerly of Geneva, but who now hails from a romantic spot on Seneca Lake called "*Big Stream Point*," has also made a discovery, he says, and we do not doubt it, for he is a genius, and has always been discovering something during the last ten or twelve years that we have known him. We have been advised by the following circular:

"I have made an important discovery in growing Pear and Plum stocks, by which method all nursery-men may grow their own stocks from seed, without risk of failure from the effects of leaf-blight. I am willing, and propose to impart this important secret to those who wish to avail themselves of the benefit of this discovery. Should you think proper, I will give you the details, on the promise from you of ten dollars; payable when the matter is successfully proved by practicable demonstration, one year from this date. I. HILDRETH.—*Big Stream Point, N. Y.*"

Now this is a very reasonable and modest announcement, more so than any of the sort we have seen. A very little information on the subject of growing seedlings would be worth \$10, and HILDRETH, we are told, has succeeded remarkably well. But if we were in his place, we would grow the stocks and sell them, instead of selling a secret which may turn out to be no secret at all.

SINGULAR FREAKS OF NATURE.—A gentleman in this county presented us with two Apples, taken, he says from the same limb of the same tree, which had never been grafted or budded, one a russet like *Pomme gris*, and the other a large green apple. We of course set this down as a mistake. But, what was our surprise, on receiving a letter from a gentleman in Jamaica, L. I., (whom we visited during the time of holding the State Fair, and who showed us, among other things, a large patch of Beets, from which he offered to supply us,) containing the following announcement: "On examining my Beets I found that some of them had turned to Sweet Potatoes, and therefore send you along a barrel, which I hope you will receive in good order." This is the greatest transmutation we ever heard of, and hope it will continue.

WATER.—PROF. KIRTLAND has again favored us with information on wind-mills for raising water, intended as a reply to statements made in the *Ohio Cultivator*. We are perfectly satisfied, ourselves, that this is by far the most inexpensive mode of raising water in situations favorably exposed to the wind; and if one or two, or twenty, have failed, the fault has been in the construction, and not in the principle. The past season has undoubtedly led to many resolves to try some means of supplying water, and we hope wind-mills will be fairly tried.

WE are indebted to the Hon. L. A. WARD, for specimens of the SHELTON Pear, measuring ten inches in circumference. Smooth, beautiful, and excellent.

**NORTHERN MUSCADINE GRAPES.**—We have received two boxes of the fruit of this new variety from E. FOWLER and P. STEWART, of Shaker village, New Lebanon, Columbia county, N. Y. The specimens first received were somewhat injured by conveyance, and we were unable to judge properly of their merits. The second box contained bunches in a good state of preservation, which afforded a more favorable sample of their quality. They were carefully examined and compared with fruit of the *Diana*, and of the *Isabella* ripened on the warm side of a building, but were decidedly inferior to both of these in quality. This sort appears to be an improved seedling of the large native *Fox* Grape, and is claimed to ripen a month earlier than the *Isabella*; if this is the case, it may prove valuable in northern latitudes, especially to those who like the peculiar flavor of the *Fox* Grape. When these were received, however, the *Diana*, growing in a wholly exposed situation, (which usually matures two weeks before the *Isabella*,) was fully ripe, and is far superior in flavor.

The seedling Grape, sent with the above, and designated "*Black Cluster*," (wholly different from the true *Black Cluster*, an old sort,) was not equal to the "*Northern Muscadine*," and we should think unworthy of cultivation, while better sorts are so easily to be had.—*Country Gentleman*.

We saw this "*Muscadine*" at Boston and considered it totally worthless. No man should either propagate it or offer it for sale.

**GRAPES.**—I send by Express a cluster of Grapes called the *Canadian Chief*, grown in this city, on a vine three years old, supposed to have come from Virginia. It has borne from fifty to sixty pounds this year, with hardly any care or cultivation. You will notice that they are hardly ripe; but all grapes in this section of the country are later this year. I think it is some thing new, as it stands the winter as well as the *Isabella* or *Clinton*, and far better than the *Sweetwater*. It beats every thing with us, but perhaps it is common with you. If you deem it worthy of notice please give your remarks in the pages of your journal. F. W. FEARMAN.—*Hamilton, C. W.*

A very large and beautiful bunch of Grapes. A foreign variety beyond doubt, resembling the *Sweet Water*, but more compact, and larger and finer than we have ever seen that variety grown in the open air in this country. We would like to know more of its hardiness—how exposed—and whether it has borne there more than one season.

**THE DRUID HILL PEACH.**—It has now been several years since this valuable late Peach has borne with us, and it has proved uniformly excellent through all the varying seasons. It ripens about the same time as *Crawford's Late*, and is superior to this, to the *President*, *Morris' White*, and other late Peaches, in flavor. Average specimens this year measured seven to seven and a half inches in circumference, and although the stone is small and thin, so thick is the flesh that it gives the Peach rather an ovate form—the model form for Peaches. We have given specimens to different pomologists, and they have uniformly pronounced it the best late Peach of its season. This is the sort that is placed by Elliott's late work on fruits, on the rejected list, as unworthy of any cultivation whatever.—*Country Gentleman*.

We are indebted to J. J. THOMAS for an opportunity of tasting this Peach in perfection, and we unhesitatingly class it with the very best late varieties.

**KIRTLAND PEAR.**—We have been favored by LEWIS F. ALLEN, of Black Rock, with specimens of this fine Pear, grown on his own grounds. They were about half the size of those we had formerly seen from Dr. KIRTLAND, doubtless in consequence of the drouth. They were found, however, to maintain fully their excellent flavor, and were quite equal in quality to the best specimens of the *Gray Doyenne*, with rather more of the peculiar *Sackel perfume*. These are the first, so far as we know, that have fruited in this state.—*Country Gentleman*.

THE "GROUND CHERRY."—Under this name Mr. P. S. BEERS, of Southville, Conn., has sent us fruit of a species of *Solanum*. It is about the size and shape of a Cherry, of a cream color, and enveloped in a dry, paper-like calyx. It is much more agreeable to the taste, when eaten raw, than any tomato. Mr. BEERS describes it as follows:

"Enclosed, according to promise, I send you some leaves of the Ground Cherry. These specimens are about two-thirds grown. The stalk of a full grown specimen is nearly an inch in diameter at the ground, and about three feet high, and its habits of growth are similar to the Tomato, and it will bear transplanting as well, and is earlier in coming into bearing. Should you sow any seed, next spring, be careful that you do not take them for weeds, when they vegetate, and destroy them. They make excellent pies and preserves—much superior to the Tomato, and are excellent for eating raw.

"Should you wish any further description, or more seed, it will be cheerfully given. I should also add, that, when ripe, this fruit falls from the branches, and will keep in its husk fresh some weeks. P. S. BEERS.—*Southville, Conn.*

WESTERN FRUIT CULTURE.—The Ohio Pomological Society holds its sixth session at Cleveland, Dec. 5th, and they are making an effort there to bring out a valuable class of facts on Western Fruit Culture. They ask each member to come prepared to submit information to the Society on the following points, viz:

First, The fruits cultivated by himself, or in his region, with the proper name, and all the local and other synonyms known to him. The character of the top and subsoil in which grown; if the surface is a level plain, or hill side, the aspect and elevation. What varieties best adapted to these soils, and locations, and their productiveness. The mode of cultivation, pruning &c. The effect of manures, kind used, when and how applied.

Second, The influence of the stock on the health and duration of the varieties grafted, or budded on the same, and the relative merits of the two modes of propagation, if any. Also the relative effect of root grafting (as practised by many nurserymen), and stock grafting, on the health and duration of the tree.

Third, Observations on insects injurious to fruit, trees, and vines. The diseases or maladies to which they are subject, with the best modes to counteract these evils, with any other information of interest on the subject.—*Country Gentleman.*

MATHEWS' CURCULIO REMEDY.—In the September number of the *Horticulturist*, you make the inquiry, in regard to Mr. MATHEWS' Curculio Remedy. I made an application to quite a number of trees, and in every instance I was very successful. The trees had overloaded crops, and all who have seen the trees were surprised. Another advantage which they possessed over the trees in this vicinity, where the shaking and killing process was resorted to, is, that not a single plum rotted on any of the trees where Mr. MATHEWS' remedy was applied, while the complaint was universal from those persons who had practiced the shaking process. Mr. MATHEWS' remedy had but one application, while the shaking process lasted four to six weeks. On a tree of *Prince's Imperial Gage*; owned by one of the citizens of Syracuse, on which the Curculio had stung nearly all the crop at an early day in the season, the owner was enabled to find about forty plums which were yet perfect, or free from injury. He came to me, and said if I could save those plums,—that is, the forty,—he would believe in the remedy. I made the application once only, and all the plums punctured fell off, while those unstung at the time, remained so and ripened into perfect fruit. I had the pleasure of showing Mr. CHARLES DOWNING and Dr. GRANT the identical tree, with its ripe plums on, of which they ate some.

As regards the Committees appointed, they have all concluded to test it another season before they report. With some, the success has been unprecedented in some cases, and not so good in others; which partial failure Mr. MATHEWS attributes to an imperfect application of the remedy.



For the benefit of the public, I will state that one of the committee appointed by the New York State Agricultural Society, wrote me that he had a few trees in his yard, or lot. To one he applied Mr. MATHEWS' remedy, and to the others the shaking and killing process. (I write now from recollection, not having his letter before me.) The one to which Mr. MATHEWS' remedy was applied (only once) had an enormous crop of fruit; once or twice he shook off or picked off half of the fruit, and then the tree was too full, and it was evenly distributed over the whole tree. With the other system, he had to continue from day to day, for weeks, shaking, catching, and killing, and the result was a moderate crop only. Thus the superiority of Mr. MATHEWS' remedy—a large crop and one application.

In another experiment by the same person in another lot, he was not as successful as in his home lot, but expresses himself decidedly that it is the best remedy ever offered, so far. In order that they may give it another trial, and be particular in each application, the committees have agreed to test it again next season, and then report fully.

Mr. MATHEWS', in a late letter to me, says he will wager \$100 on any tree, in any soil, and any where, that he will save a full crop by one application of his remedy. I have, from my experiments, the fullest confidence in it. A. FAHNESTOCK.—*Syracuse, N. Y.*

We are glad to have assurances so encouraging. We hope all that is here said will be more than realized. We impatiently await the committee's report. Some time ago we expressed the belief that *one* season would not satisfy them. Impatient as we are, we are glad that they are determined not to be rash. Rashness is one of the errors of the day.

HOUSE RIPENING OF FRUIT.—Your leading article, in the last number of the *Horticulturist*, is on a subject of great importance, in my opinion, and in itself is a host of information. But as you ask others' experience, I will take the liberty of sending you some of mine. Some six or eight years ago, I was called upon to graft a Pear tree, belonging to a neighbor, who stated that the tree bore nothing but worthless fruit. The following autumn, chancing to pass by the tree, I noticed some very fine looking Pears on the branches that had been left ungrafted; asked for, and obtained a few. I took them home, and ripened them in the house, and they got quite good,—the owner called them first rate. Last summer I obtained a few *English Jargonelle* Pears from a neighbor, that were so green as to be considered worthless. I told him that we would see about that. About ten days after, when in company with him, I handed him one of the Pears, and had to assert very earnestly that they were the same ones, before he would be convinced. In my notion there is no Pear that is so much improved as the *Jargonelle* by house-ripening; for under proper treatment it can be made quite good; but if left ripen on the tree, I consider it a vile fruit.

Yesterday I purchased two bushels of Pears, on the tree, for which I paid twenty-five cents per bushel, as the owner said they were not good for anything. It is a Pear quite common about here, but universally left laying under the trees to rot, or converted into cider. My calculation is wrong if I don't make a good Pear out of it about January or February.

Now about the ripening of Pears. Summer varieties have always done well with me, taken from the tree about ten or fifteen days before they might be ripe upon the tree, carefully hand picked, laid into a drawer which should not be closed quite tight, and my word for it, many Pears that are not worth picking up when fallen ripe from the tree, will be found to prove of good quality.

As to winter Pears, my plan is to pick them carefully, lay them on the floor of a northern room for two weeks (the room nearly dark), with only enough air through the windows to prevent the dampness from settling upon them in cool nights. I then pack them in a box pretty close, and leave them in as even a temperature as possible, until I want them for use; then put a small quantity in a warm room, in a box or drawer, and in ten or twenty days they will begin to ripen. How to eat a good Pear in winter no one need be told.

Summer and fall Apples are not only benefitted, by being taken before fully ripe, but their time may be greatly prolonged. I have kept the *Summer St. Paradise* until Christmas, by taking them a little green, wrapping each one in paper, and packing them in the bottom of a chest, under some clothes.

Peaches, with us, ought to be very nearly ripe before taken from the tree—at least the early varieties; the later ones will bear taking off greener. The *Heath Cling*, if taken at the proper time, can be kept until near the end of the year, by taking them from the tree before they are at all soft, wrapping in paper, and put into a close drawer or chest.

Cherries are not fit (at least, most kinds) to be eaten after they have been picked fifteen hours; but the great error here, is, three-fourths of them are taken nearly a week before ripe. I have for years endeavored to persuade some of my customers to leave the *Black Tartarian* until ripe, but of no avail; they will pick them when half ripe, and then complain that I sold them a red Cherry, instead of a black one.

Strawberries, above all, I think should be fresh from the vines. We never think of keeping them over night for market, but generally send them to the town within three or four hours after gathering. They are at once picked into quart boxes, handled carefully, carried two miles in a spring wagon, and look as when plump and fresh almost as on the vines. A lady from Philadelphia once saw some of my Strawberries in town, and remarked that few came to the city market in as fine order. While upon the subject, I will state that with me, the *Hovey's Seedling*, *Burr's New Pine*, *Longworth's Prolific*, and *British Queen*, are my favorites among some dozen varieties that I have experimented upon.

In Plums my experience has been small, as the Curculio saves me the trouble of learning how to keep them. However, some fine *Columbia*, *Jefferson*, *Princes Imperial*, and *Washington* Plums have borne. SAMUEL MILLER.—*Calmdale, near Lebanon, Pa.*

READ'S ANGLO-AMERICAN APPLE.—This is to say that I have a seedling Apple that will excite all fruit growers, when once brought to notice. As I am in possession of most of the leading varieties of the present time, and these in bearing, I am fully able to judge of its qualities pretty correctly, and when brought on the table with *Gravenstein*, *Sweet Bough*, *St. Lawrence*, and other leading apples of the same season, it is always consumed first, and the remark always comes out, if any are present that have not partaken of it before, O! what a splendid apple! In short, it is among Apples what the *seckel* is among Pears,—it possesses a mingling of juices that is not to be found in any other Apple. It may be called sweet, soft-fleshed, melting, and rich. It is a good baking or stewing Apple. Begins to ripen in August, and lasts till December. The Apple has crimson stripes from the stem half way up its sides with a prominent seam from stem to blossom, which feels and looks like a thread stretched over the skin. Its great excellence caused me to graft it on large trees immediately, so that at this time I could cut a great many grafts. I have not yet let it go out abroad, but intend to do so. If you would like to propagate some four or five thousand, I could furnish you with the scions. I brought fifteen or twenty fine large Apples from the tree, on purpose to send to you, and hid them in a bed room off the kitchen, till I could go to the station; and when I brought them out to send to you, they were too ripe,—the cooking stove had spoiled them. They look very much like your colored drawing of the *Melon Apple*, but a great deal larger; and if I can judge rightly, it is destined to cast all of its season far into the shade. Next year, probably, I shall have bushels of this truly splendid Apple, when you shall see it. W. H. R.

To ANNEALS.—I could not be so ungenerous as to take advantage of a consent forced from you by a severe twinge of gout. I should surely expect as that "biggest toe" grows beautifully less, you would forget past pain and regret the *present*. I begin to think it wouldn't be a very light thing for myself or husband to change our present active lives for the gontee's easy-chair and canes. It is hard to realize, when in the full tide of life and health, all the *inconveniences* of sickness and helplessness. The vividness of such things have seemed to come home to me in their reality this past trying summer, coming with pain and death to so many families. I have pressed my own with a trembling fear, and felt how much I loved them. I have felt the deep springs of gratitude well up with a warm gushing, that not a pain or an ache has occurred in my large household to quiver the heart-strings of sympathy. And rather than have my heart wrung with sights and sounds of pain, I would dwell forever in a humble home, nor wish for change.

But you read me wrong when you take me as discontented with my lot. I cannot say that I have known such feeling. I have only felt at times an ineffable *longing* for the fulfillment of plans for comfort and convenience which gild our future, and which we expect so surely some day to enjoy. It was not the enjoyment of your perfected home for two years which dazzled me, though I tried to prove how contented we could be there and our capability for it. It was the thought that our home in that interim, under the supervision of one of so much taste, and means at command, and who seemed to need some more stirring and active occupation, would be made in a much shorter time than we could bring about, partly at least, what we wish it. Your obtuseness in perceiving this is quite a convenient evasion, and you glance from this principal point with a lawyer-like cleverness of ingenious retorts upon your correspondent.

I do not fancy we should return to such a home, though far short of yours in elegance, with discontented spirits. Such temporary enjoyment would no more make us unhappy than a visit to some rare museum of art and beauty, or to some distant friend occupying such a home. Should my sons chance to journey to storied lands of old renown, where objects of classic beauty from time immemorial were gathered, and come discontented because they could not dwell forever there, or bring home all they saw desirable, I should confess that their parental training or self-culture was somewhere deficient. Were you, sir, made a prey to discontent or envy by such journeys? The treasure you brought with you was but a mite compared with that you left. But could you not still enjoy those in memory, as well as these in possession? I have found it easy to enjoy the better and more beautiful things that surround others for a time and lived them over and over again in retrospect, and felt them expand my intellect and heart, instead of being all shrunk up into an insignificant mummy of discontent, as though my feast of luscious fruits had been one of green persimmons.

As to the shutting up of certain apartments as too choice for us, or beyond our orderly, skillful care—to that I could not stoop. My haughty pride would not brook an insinuation that the choicest spot in any grandee's palace was too fine, or beyond the appreciation and care of me and mine. Because the wheel of fortune has landed you, sir, in a palace, and me in a cottage, is it that we were not good enough for the palace? Allow me rather to suppose that it is because you needed the reflected lustre of fine surroundings, and needed the appliances of convenience to accomplish aught of note, but in the cottage might pass along a mere ordinary like many other specimens of plodding humanity; while we were capable of reflecting brightness upon the cottage and accomplishing much, unaided by favorable circumstances, and yet were not incapable of doing justice to a palace home. Ah, I see, you deem us too plebeian for your patrician halls! Well, there's a niche in this world for every one, but I don't know as it will be defeating or thwarting our destiny if we exert ourselves to get out of the *cottage niche* into the *house niche* of our hope.

So you are a grandfather! then I fear past the time for entering into the full spirit of rearing a new home with all its appurtenances. A more youthful tide should quicken your veins and give the gusto of present enjoyment to insure final success. Ah, changes and great undertakings



are no longer for you! Rest you in the quiet enjoyment of gathered perfections. Dispencc all the happiness you can to those about you. Instruct, advise, and lecture all the inquisitive and ignorant idlers so likely to hover about one in your position, and rouse them to walks of useful activity. Let the world about you enjoy the mental and bodily labors of your many years and collected treasures. It is but a little while you can enjoy them, and you cannot take them hence. So will you pass down to the dark valley with a peaceful quiet, feeling conscious that the talent for such accomplishment, and the wealth to execute great plans, bestowed upon you, have not been selfishly expended.

Shall I mistrust that you are not the possessor of such varied and all-comprehensive talent as I supposed you? Surely I see nothing incompatible in the enjoyment of all you boast, in addition to wildwood, prairie, and all more truly *natural* things and occupations. And I see no reason why one cannot enjoy more than one degree or class of objects, pursuits and pleasures.

How can I help "persisting" that you are "unfortunate"? Are you not continually rousing my tenderest sympathies? Now they are awakened afresh, and unbidden tears spring, as ever and anon like a solemn knell, rings through my soul with its sad vibrations, "hope, which to me, alas, is lost!" They echo there till I feel my heart with rueful sorrow swelling. How can you live without that feeling which seems to tinge unconsciously every hour of my life. It never would do for you to come here without a lively, hopeful spirit. Could I relate to you the trials of the past season, and difficulties of obtaining "*help*" of any sex or age—such longings, and searchings, and enquirings, and hopings for something or somebody—then wondering whether that whole class of helpful humanity has been obliterated, that there seems none to be roused anywhere, you would see that one need have a stock of hope, high, broad and well grounded. And there are many other things for which one need have a vast store in reserve.

I fear you underrate the comprehensiveness of Mrs. ARRICUS' talent. Circumstances have never sounded their depths. Women, I think, more than men possess a vast amount of undeveloped energy and capability, and there's no telling till this is called out by circumstances what an amount, and what very varied things, she can do—gliding from sphere to sphere of duty with ease and facileness. If Mrs. ARRICUS is not such an one, then you have somehow spoiled her. But I'll warrant, place her here for instance, you would find every nook and corner of the house still in fastidious neatness. She would find time to impart some of the accomplishments and learning of other days to her children and attend to your dinners *practically* as well as theoretically; and at evening visit with you, or at some social gathering join in converse on literature, and taste, and science with others whom you might fancy, knew you not to the contrary, had never entered the kitchen except to order the cook, or cut out whole stores of garments needed by a numerous household, but merely directed her sempstress. Such are the women the West produces. If she had once had her choicest silk dress and crapesawl ruined by the blundering of a stupid Dutchman, who, in his attempts to put the carriage in order, had daubed the whole "gear," and every part of wood work and leather work, with a superfluous quantity of grease *to make it shine*. While you were wondering how in the world you would ever teach that stupid fellow what and how to do, she would insinuate BRINGER into the taking out pails of water and sponges, and superintend the whole operation, and even take the sponge in hand herself, when fearing for the fate of the delicate lining. And BRINGER couldn't object at going out of her sphere to finish the "gear" when madam encouraged by showing and touching up any difficult places herself. An educated imaginative woman has more ingenuity about work that she has never even seen performed, than an ignorant servant, devoid of ideality, who has never cultivated aught but muscular power, and directed his ideas and powers only in certain directions. At evening she would with you turn over your drawings and engravings, and you would not dream so "sticky a substance as grease" had ever polluted her fingers. Such diversity of talent does the West, where help is poor and scarce, call forth in daughters more tenderly reared in the cultivated East. Yet they are none the less capable of passing their lives happily and profitably

without ever soiling their fingers, or exerting their strength, in what we call work, and just as capable of doing justice to a picture gallery and rooms of recherche elegance.

But I wouldn't blame Mrs. ARROWS or any other lady for not wishing to call up any such hidden genius. There are talents and occupations enough much more agreeable in their execution and performance, and through which one can be quite as useful to themselves and others. Though I would not advise them to shrink from *any* duty, but where they have the choosing of their own duties and manner of life, untrammelled by compulsive circumstances, it would be a great waste of opportunities and time to seek notability in occupations which others, who are not capable of filling their sphere of duties, can do quite as well.

I was just thinking of a day in my youth when I sat in a handsome city parlor with a married friend whom I greatly admired. She possessed a mind richly and variedly stored—a countenance all sweetness and amiability, tinged with a soft dreaminess which peculiarly harmonized with her quiet, gentle manner. One would scarce suppose her gifted with more than energy to gently hint the presence of "dust" that might fleck her "carriage cushions." How I enjoyed her conversation as she opened to my youthful mind the rich stores garnered in her own. I seem to hear, even now, that lute-like voice. Now behold her in a Western home, far from church or school, doing much household work, rearing her own little ones while she burnished up her Latin and Greek to assist in preparing sundry nephews for college, and shrinking not to ride off a dozen miles to take care of a sick neighbor's family through the night. Her fingers have doubtless been often very "greasy," but did you know her, you would not dream of shutting up your choicest rooms from her supervision and enjoyment.

You can't have a hand in rearing *my* home, if you dubb children as troublesome creatures. It is for my children that I wish it—for them I desire all things about me comfortable, convenient and attractive. Were I a lone maiden, or motherless wife, greatly diminished would my longings for these things be. I can scarce imagine how anybody can have hopes and wishes that are not somewhere connected with children—children which one has, may have, or expects and hopes to have. You "forget" them! Did you ransack your whole vocabulary for some word to test the provocative depth of my wrath? Were there no more children on this earth, how quickly would all research, and invention, and improvement be stayed. Who would exert themselves when the fruits of labor would only be known and enjoyed by the present generation, so soon to pass away.

But Mr. BARRY will shut me out of his beautiful monthly if I am so prolix and loquacious. It's a pity that I am just now so particularly engaged that I can't pay you a visit of cheer and sympathy, but I hope to hear better things of those swollen feet soon. If ever there comes for me some leisure day—which now seems so improbable—I may knock at your gates if you will promise not to rank me among the "inquisitive idlers," but where objects of floriculture and horticulture present themselves, let me indulge my admiration and curiosity to its full extent. *ELSIE.*  
—Woodside, Waukesha, Wis.

This last letter of our fair friend "ELSIE" is interspersed with many sharp and good things, but really it is *too* long. Ladies's pens are like their tongues, not easily tired. We hazard something in saying this.

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AN EXPLANATION.—We have received a letter from Messrs. THORP, SMITH, HANCHETT & Co., of Syracuse, in reply to a note of Dr. ESHLEMAN in our last number concerning the *Hosenshenk* Pear. It will appear in our next.

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## Answers to Correspondents.

THE PEAR BLIGHT.—I am cultivating the Pear quite extensively, both on its own and Quince roots; and having been a sufferer to a very great extent, this season, from the effects of the frozen sap blight, I have watched with anxiety the *Horticulturist*, and the other horticultural journals (as misery is said to love company), to ascertain whether the evil has prevailed to any great extent elsewhere. I know that many of my neighbors have suffered very severely from the same cause, but I do not learn from the horticultural papers that it has prevailed in other localities. The disease manifested itself here about the middle of June, at which time my gardener commenced, and still continues, a thorough course of amputation, cutting in all cases where it was practicable, below the part diseased—in many cases taking the head of the tree entirely off. My trees were most of them large and very vigorous, comprising about 150 varieties. No sort was spared,—all were more or less affected, excepting one, *Bartlett* on Quince,—not one of which was diseased,—and a few *White Doyenne's* that were last year in a torpid state, owing, my gardener thinks, to an application of "Barry's wash." The destruction has been sickening to an amateur cultivator. I have lost already at least two hundred trees, many of them of model forms, all of them of the best sorts, and of all ages from three to fifteen years; and I desire to know whether the disease has prevailed in other parts of the country as in this locality. I desire the information before I can determine whether to replace with Pear or other fruit trees, the vacancies in my orchard occasioned by this fatal enemy to the Pear. AMATEUR.

The disease referred to is generally known as "*fire blight*," because trees attacked with it, assume the appearance of having been scorched with fire. "*Frozen sap blight*" would be an improper name, because frost has nothing to do with it. Whatever the agency may be, it comes in the growing season.

It has committed extensive ravages among pears in almost all parts of the country; and it also attacks both Apple and Quince, but is not usually fatal to them as it is, or would be, to the pear. In 1846-7, and two or three subsequent years, it prevailed alarmingly at Rochester and the country about; but with the past two or three years it has in a great measure disappeared. In other parts, however, both east and west, where it had not appeared during its prevalence at Rochester, it is now making great havoc among the Pears. Judging from its local prevalence at first, and its mode of attack, we felt convinced that it was some minute insect that stung the tree, and infused a virulent poison into its circulating fluids; but no insect has ever been discovered, to which it can reasonably be attributed; and a multitude of facts have from time to time been collected, which go far to show that the disease is produced by intense solar heat "scalding" the sap, or by some peculiar condition of the atmosphere, which interrupts the natural action of the cells, and produces extravasation of the sap. The latter theory is supported, in some degree, by the fact that blight is very often observed to prevail in a moist, sultry time; and also by the fact that certain varieties in some localities are swept off by it, when others escape. A case was mentioned to us, a short time ago, by a gentleman at Lockport, in which *Glout Morcous*, planted alternately in rows with other varieties, were uniformly destroyed, while the others escaped. *Passe Colmar* and *Stevens' Genesee* are among varieties that we have repeatedly heard classed with those particularly liable, and *Seckel* and *Virgalieu* among those least liable to its attacks. For our own part, we have seen one variety suffer in one season and in one locality, and escape in others, so much that we do not place much weight on such cases, though they certainly should be carefully taken into account in studying this malady.

ALLOW me to ask you a few questions, which, if you will answer through the *Horticulturist*, will oblige me much. In root-grafting, is it better to wind with waxed paper, or leave them unwound? (1)

What is the best substance to pack grafts in for winter keeping? I used sawdust. (2)

Give me your opinion of nursery tree roots for root-grafting. I put out 10,000, and did not get over 3,000. The ground is low, and clay subsoil, but will raise good corn. (3)

What course should I take to raise the Mountain Ash? (4)

What are the stocks used for budding the Rose on? (5) W. S. H.—*Galion, Ohio*.

(1) Winding with waxed paper keeps the graft in its place,—a matter of some importance.

(2) We keep them in sand—sawdust will do very well.

(3) We can recommend nothing but the roots of healthy seedlings one or two years old, and then to use the whole root, setting the graft on the collar.

(4) Wash out the seed and mix it with earth, and let it lay for a year, before sowing.

(5) The *Manetti*, and the common *Michigan* are both good stocks; as a general thing we prefer the first. It grows finely in our hottest and driest seasons.



GRAPE GRaftING. I was shown a freak in the Grape vine, a few days since, that beats all that has ever come under my notice. WM. LEHMAN, of Lebanon, a very exact and careful florist and horticulturist, engrafted grapes of a first-rate variety, a seedling of his own raising, much resembling the *Catawba*, upon roots of some other good varieties, three or four years ago, the result of which he showed me; upon three of the vines there is now fruit; and a more villainous thing in the Grape line never went into a man's mouth. They are about the size of Elderberries, nearly all seed, and as sour and as astringent as a Tamarisk. Here they lay before me, as taken from the vines,—the original and the engrafted,—and a greater metamorphose could not easily be undergone. The question arises, can such a thing be? Were it not that Mr. LEHMAN is a man of taste in such matters, I would doubt it. But the vines and leaf favor the original plant. I will give you his own words on the subject, "Had I taken roots of some wild Grape, I might believe that the graft failed, and these were sprouted from the root; but there was never such a grape on my grounds; and further, I know that the grafts grew."

My object in writing this, is to learn whether Grape grafts often cut such freaks. If so, there is no dependence in the operation. Of this very Grape, I sent Mr. LONGWORTH, of Cincinnati, some cuttings for grafting, some years ago; and if they turned out with him as they did with Mr. L. he will think me a very knave, when at the same time I thought I was placing in his hands a Grape of considerable value.

I should much like to hear in your next number of the *Horticulturist* whether you have ever seen any thing of the kind. S. M.—*Columbale, near Lebanon, Pa.*

We have never heard of such a case. Is it not probable that Mr. LEHMAN made a mistake in cutting his scions? If only one vine had produced such fruit, or but one bunch, it would not have been very remarkable; but that *three* should, is very strange, and compels us to think there must be an error somewhere.

Will you please to inform me how to propagate dwarf box? how long must it remain in the bed before it will answer to set it for the border? can a box that was planted last spring be removed this fall with safety? (1)

Is not an evergreen screen composed of but one variety, too monotonous? Would not a greater effect be produced by alternating Red Cedar, European, Chinese, and American Arbor Vitæ, English Yew, Holly, &c.? (2) C. F. W.—*Luron, Ohio.*

(1) Propagate dwarf box by cuttings, or by division of the plants. If you have any old box tear it in pieces and set them in the ground so that only two or three inches of the top will be above the surface, and in one season it will root sufficiently to be fit for edging.

Box planted last spring may be safely removed this fall, but it should be done early or deferred till spring.

(2) We prefer screens composed of but one variety of plant, because a uniform regular growth is indispensable.

A hedge or screen more particularly is something in which *variety* is seldom sought for as in plantations.

Will you inform me how to propagate the Climbing Honeysuckle (1), Buffalo Berry (2), Syringa (3), Snow-Berry (4), Snow-Ball (5), and Rose of Sharon (6)? Will the seeds of the Blackberry, Lily, Tiger Lily, and German Iris, produce plants like the original (7)? B. C. CUTLER.—*Wyoming, Wis.*

(1) By layers.

(2) By seeds.

(3) By layers.

(4 and 5) By layers and suckers.

(6) By cuttings.

(7) The Blackberry not always; the others will unless different sorts are growing together.

Do you know *Bilbergia thyrsoides*? I have it in bloom. It is a magnificent plant. It is the most splendid Dromeliacean plant I have seen; the beautiful *Acchmea* are nothing in comparison to it. ARTHUR HOLUS.

We have not seen it, but we see it ranks among the finest rare plants. LINDEN, of Brussels, advertises *Pitcairnia nubiigena* and *echinata*—two fine species from South America.

How shall I get a copy of the proceedings of the National Pomological Society?

Address the Secretary, H. W. S. CLEVELAND, Esq., at Boston, Mass. Those who are not members will have to pay for it; we do not know how much.

THE MATHEWS' Remedy for the Curculio—What of it?

The committee will not report this year. See Mr. FAHNESTOCK's letter.

### Notices of Books, Pamphlets, &c.

A COMPLETE MANUAL FOR THE CULTIVATION OF THE STRAWBERRY, with a description of the best varieties; also, notices of the Raspberry, Blackberry, Currant, Gooseberry, and Grape, with directions for their cultivation, and the selection of the best varieties. By R. G. PARDEE. Published by C. M. SAYTON, New York.

MR. PARDEE has long been known to us, and to our readers also, as a Strawberry fancier; and we are glad that he has taken up his pen, and placed before the public all that he knows upon the subject. The title of his book is sufficient to indicate its scope. It will be seen that it not only contains Mr. PARDEE's own views, but that of others, whose opinions are respected. Judging from a hasty inspection of the book, we should say, that it contains much valuable information; but on the Strawberry it is not so complete as we could wish it. We would have been glad if Mr. PARDEE had collected some accurate statistics of Strawberry culture in the neighborhoods of New York, Boston, Philadelphia, Cincinnati, and all the large cities that support an extensive culture. We should have been glad to see a full and accurate account of the management, varieties, &c. This would have put us in possession of facts showing the actual state of Strawberry culture in this country in 1854, and would not have been too great a task for a book devoted to that special subject.

CATALOGUES RECEIVED.—*Thorburn's Descriptive Annual Catalogue of Bulbous Flowering Roots, with directions for their Culture and Management, for sale by J. M. THORBURN & Co., No. 15, John street, N. Y.*

*General Catalogue of Fruit and Ornamental Trees, Shrubs, Green-House Plants, Roses, &c., cultivated and for sale by JOHN B. EATON, & Co., at the Ouklands and Woodfort Nurseries, Buffalo, N. Y.*—A very well arranged and tasteful Catalogue. The lists of Pears are remarkable for the very full enumeration of synonyms—a very useful feature, and we take pleasure in calling attention to it.

### Horticultural Societies, &c.

HORTICULTURAL DEPARTMENT OF PENNSYLVANIA STATE AGRICULTURAL SOCIETY'S EXHIBITION.—As many of our readers are aware, the Pennsylvania Horticultural Society, by the recommendation of its special committee, abandoned its Fall exhibition and united with the Pennsylvania State Agricultural Society. The immediate cause of this step was the destruction, by fire, of the usual hall of exhibition which had been annually hired for the purpose for some years past.

We took for our annual horticultural feast, what had been provided by a committee of the Society, acting under the direction of the executive committee of the State Agricultural Society, and now proceed to notice a few items of interest which occurred to us to be note-worthy. And here we may state, that if the Floral Tent or Hall had been dust-proof, instead of dust-producing, we might have recorded the display of plants and flowers to have been equal to any previous display, and the specimens of green and hot-house specialties as unequalled at any previous annual exhibition of the Society; but dust, dust, obscured the tints of the petals, the marbling of the beautifully variegated foliage of our choicest favorites, the healthy and refreshing green of the once glossy leaves, ruined all, and disgusted every fastidious dust eater; and the fruit, which on all occasions is but too tempting, was secured on the second day from all officious and unprivileged critics, unless those who were so fond of fruit as to eat it at the peril of an extra ounce or two of dust. Have we said enough of the dust? no; we felt far more; we could not distinguish the Dahlias, after being exposed for a few hours; the Cissus discolor and Dioscorea

discolor and *Maranta Zebrina* were all in all. We had to wipe off the deposit before we could recognise the ground color.

Several of the liberal amateurs of the city sent their full-grown specimens to decorate the hall. These plants (on a former occasion, designated hop poles by a siterical correspondent of your Magazine) have their uses, and without them the Floral Hall would have looked bare and unsightly. To those from a distance, who have read and not seen the curiosities of the tropical forests, these much abused specimens are objects of intense interest. Many of our country friends have read of, but not seen the Indian Rubber tree, the Cinnamon tree, the green and black tea plants of commerce, the Camphor plant, the Cocoa tree, and many others noted in the arts, and famous in domestic circles. Most of these may be seen and admired on such occasions, and though their aspect and dimensions may not please the critical eye of the "working gardeners" of our day, they are pleasing to the less fastidious visitor who reads as he runs.

In addition to such valuable plants as we have adverted to, from the conservatories of the vicinity, there were for competition a most valuable collection of green and hot-house specialities. *Cissus discolor*, with its remarkable and by-all-admired foliage, was most conspicuous; for the specimens deposited from the garden of Jas. Dundas, Esq., by Mr. Pollock; from R. Buist's nurseries, by Mr. Sutherland; and several other well grown and trained plants, were equal to the highest expectations of those who had seen it in the earlier stages of its cultivation. Trained on a suitable wire or wood trellis, we cannot find, among late introductions, a more splendid object. *Gardenia Devoniana*, somewhat rare, was in good condition; the flowers at first sight resemble those of *G. Stanleyana*, but are of a cream color inside, as well as outside; the tube of the Corolla is elongated, as in *Stanleyana*, and the Stigma is club-shaped, by which the species may be readily distinguished. Very fine specimens of *Allamanda nerifolia*, *Cathartica*, *Aubletii*, and others, were among these collections. Large and well grown plants of *Clerodendron kamperii*, *squamatum*, *fallax*, and others, attracted attention by their ample dark green foliage and bright scarlet flowers. We also observed a fine specimen of *Stigmaphyllon ciliatum*—a very choice climber, with curious yellow flowers. Several new *Begonias*, such as *Xanthina* and *Prestoniensis*, *Passiflora alata superba*, *Ipomea ficifolia*, *Schubertea graveolens*, *Scutellaria Ventenatii*, *Dioscorea discolor*, and many other more familiar green and hot-house plants, seemed to us worthy of notice. Our readers who are interested in these details must excuse our particularizing more fully the various objects, and the cultivators who deserve honorable mention.

In addition to plants, there were several displays of cut-flowers. One collection of 24 Dahlias was very choice, for the season, which was against the development of the points of this fancy floral favorite. A stand of Verbenas was also much admired, before the clouds of dust obscured their bright tints. We noted a great number of dwarf Asters, or Queen Margarets, from M. Souchet, Woodbury, N. J., late of Paris. They were much admired by the amateurs who depend for flowers on their city yards, for they were familiar objects to them. A very fine display of variegated plants was exhibited, similar to that noticed at Brooklyn. They were among the most attractive objects on the ground—carefully selected, and of great value. Also, a little stand of box, filled with small variegated novelties, and interspersed with *Lycopodiums* and Mosses, was neatly arranged and tastefully conceived. We were much struck with a collection of prepared specimens of the Algae, or sea weeds, in large glazed frames, suspended in the Floral Tent. We confess to a little scientific predilection, and cannot pass these splendid specimens without a word. We have to furnish at another time Mr. Somerville's method of floating these unusually large specimens, by an apparatus of his own invention, the full details of which he kindly placed at our disposal. Algae deserve a little more attention, even in a commercial point of view, than they receive here.

The fruit department has now to be noticed, but to do it justice would require more space than we can at present appropriate to it; a passing glance is all we need attempt at present. There was a large display of choice Apples—some fine specimens from the western country. Ohio and Michigan had their representatives. A fair display of Pears was to be found on the tables; their quality and history we must leave to those gentlemen who were set apart to the agreeable work of dissection and gustation. The grapes we could judge of ourselves. A bunch of Black Hamburgs, weighing upwards of six pounds, from the vineyard of David S. Brown, Esq., was most



conspicuous; it might be described as a bunch consisting of three shoulders, as the principal and two shoulders were equally large. The wood was unusually strong, a portion of the cane having been cut with the bunch. We should like to learn the history of that vine for the previous and future season. There were several other displays of Exotic Grapes. A number of varieties were exhibited by R. Buist, Rosedale nurseries, several of them new sorts, or at least not yet in general cultivation here. The Brincklé Grape was also deposited, for the history of which we may refer to previous reports, and for its quality to those who tasted it. It is a seedling raised here from foreign seed. (Is this a native grape?) The specimens of Watermelons, were very fine. We can say so much, as by special favor we were permitted to taste several of them, after the judges had proceeded to their satisfaction. Several baskets of good looking Peaches were among the fruit observed by us; but as no one can report so well of this department as the three gentlemen who had the authority to do so, we leave it for them, and hope to have a note of any thing new and interesting before next month.

The Vegetables far surpassed our expectation, there were extensive lots from Girard College garden, gardener, Mr. J. Jones, consisting of sixty-seven varieties—all of them superior in size. From the Pennsylvania Insane Hospital, gardener, Mr. Reilly, the display was respectable. Mr. Felten, market gardener, had a very large table covered with an immense variety. Near the vegetables we discovered some leaves of the *Victoria regia* out of its element, and not at all attractive, as by some mismanagement (strange to us), the tank prepared for it could not be filled; it was a box lined with green braze cloth, and absorbed a large amount of water. One solitary leaf was to be seen floating in it, while in various parts of the hall we were questioned as to where *Victoria Lily* could be found, proving that public taste has not yet abandoned this giant of the soft and perishable section of vegetable nature. No better opportunity has ever been afforded for displaying it to advantage—none less carefully improved. Leaves of the *Nelumbium speciosum* were also contributed by Mr. Cope, as well as a living plant; but it may have been supposed that the lily of the Amazons, with its aristocratic title, would prove obnoxious to the democracy of Pennsylvania. There may be something in it! We refuse to cry *Wellingtonia gigantea* after John Lindley, though the great Conifer of California is worthy our highest veneration next to the supreme providence which gives his children such evidences of his silent power. S.

NEW YORK STATE FAIR—HORTICULTURAL EXHIBITION.—We had expected to receive long before this, a correct copy of premiums awarded. The reports published in the newspapers were so incorrect as to be worthless, and a correct report, although promised, has not yet reached us. We therefore, for the present, give a few notes. The general exhibition was not quite as good as usual, we think. Very little fruit was exhibited from the vicinity of New York. This, our friends informed us, was owing to the almost entire failure of the fruit crops there.

The show of Pears was fine, though mostly from Rochester and Boston. The peculiar smoothness and beauty of the Pears from this place was subject of remarks by almost all visitors. Messrs. Ellwanger & Barry exhibited about 200 varieties, and Messrs. Hovey & Co. nearly as many. J. H. Bailey, of Plattsburgh, made a beautiful show of Apples, some 70 varieties. The only good show of Apples by amateurs, was made by N. & E. S. Hayward, of Rochester. They received the premium for the best twenty, and would also have received the premium for best collection if they had competed for it.

The exhibition of Grapes, both native and foreign, was very fine. We never saw finer Catawbas and Isabellas. Foreign Grapes were in abundance, beautifully grown, and attracted crowds of visitors. Nothing astonishes a promiscuous assembly, who have never seen any thing better than poorly grown native Grapes, so much as a fine display of foreign Grapes.

The display of cut Flowers was as good as could be expected for the season. Several fine collections of pot-plants added much to the interest of the occasion, and to the beauty of Floral Hall.

The show of vegetables was not equal to our hopes and expectations.

**BROOKLYN HORTICULTURAL SOCIETY—FALL EXHIBITION.**—The unprecedented drouth of the past summer has not altogether destroyed vegetation. The Brooklyn horticulturists, and their enterprising friends of more distant localities, have proved that by skill and perseverance the unavoidable disadvantage of temporary drouths, continuous rains, or prolonged frosts, may, at least to a certain extent, be counteracted, and that judgment and industry may contend successfully against the supposed evils of storms which too often occur just at the time when they are least welcome. The complaint of a deficiency of vegetable productions is general: poor Apples, few Pears, and fewer Plums, is the report we daily hear. But if the quantity be limited, there are some decidedly respectable specimens. If, then, skillful horticulturists can show how they have defeated (if we may so speak) the season and its evils, why should not farmers, and all interested in earth's productions, aid in extending that skill and judgment? We have seen on the tables of the Society's room, as fine fruit as need be wished for; and if the Society does not teach all cultivators to grow it equally fine, it is because they do not go to learn how.

We do not here hope to be able to inform our readers of the details of the exhibition. We can only devote space to a brief notice of the more attractive items. As fruit and culinary vegetables then, are supposed to be the most useful and most substantial part of the display, we shall first devote a few lines to that portion.

The collection of native and foreign Grapes was unusually fine. But this is not sufficient to convey an idea of its merit; it was better than the most experienced observer of the season and its peculiarities could have hoped for. Splendid bunches of well colored Hamburg Grapes were presented, which the most successful cultivators admitted were worthy of comment. With vine mildew, blight, thrip, scale, red spider, and the myriad of less formidable obstacles to success, the gardeners of our vicinity have proved that all may be overcome. Mr. Langley's gardener, of Fort Hamilton, has acquitted himself creditably. The report annexed shows that he obtained the premium for the best general display. His collection consisted of eight varieties, including Black Hamburg, Grizzly Frontignae, Austrian Muscat, Royal Muscadine, St. Peters, Chasselas, Black Muscat, Muscat of Alexandria. He also obtained the premium for the best six varieties, viz., Muscat of Alexandria, Black Hamburg, St. Peters, Chasselas, Austrian Muscat, and White Lisbon. We were informed, on inquiring of him, that he had not experienced, during the past season, any of the pests above enumerated. It must have been observed by the most careless cultivator, that the season just passed was remarkable for the absence of mildew. In cases where it was observed, inquiry would disclose some want of care or judgment on the part of the gardener. Yet we are told that much sulphur has been used in some cases; perhaps more for prevention than cure. So much for the Grapes, which we must notice more fully next month. We must insist upon all committees adhering to the practice of giving the preference to well-colored bunches over large red ones. The experienced cultivator demands it at their hands. Such was the rule on this occasion. There were a few very choice bunches displayed, which we feel much disposed to notice—a large and well-set bunch of White Muscat of Alexandria, one of Purple Damascus, and one of White Syrian. There were no bunches of Cannon Hall on the table. The Black Hamburgs were unusually fine. The contributors in this section were Geo. Hamlyn, gardener to W. C. Langley, Esq., Fort Hamilton, L. I.; Mr. D. Hunter, gardener to Mr. Rennis, Lodi, N. J.; and Mr. Morrison, gardener to R. M. Blawell, Esq., Astoria, L. I. Several choice bunches of native Grapes were contributed by Martin Collopy, gardener to J. H. Prentice, Esq., Brooklyn Heights. There were also on exhibition bunches of the Graham Grape, from the original vine, presented by R. R. Scott from Wm. Graham, gardener to the Guardians of the Poor, Blockley, Philadelphia, the originator of this acquisition to our list of select hardy Grapes. We must reserve our description of it till another opportunity offers. The Concord, Charter Oak, and Fox Grapes were also represented. The two latter were easily detected, but not easily distinguished.

The display of Pears and Apples added considerably to the importance and attraction of the exhibition. The great bulk of these were from Boston, and had been before the American Pomological Society. The contributors were Wm. E. French, Esq., per A. J. S. Degraw; B. V. French, Esq.; Messrs. Burr, Hingham; N. Stetson, Esq., Bridgewater, Mass.; Messrs. Hovey & Co., of Boston; and Messrs. Ellwanger & Barry, Mount Hope Nurseries, Rochester. Three

specimens of very highly-colored Washington Pears, in the collection of the last-named firm, were very much admired. The Howell Pear of their collection was also noticed as looking like a choice fruit. We carefully compared many of the specimens, and must say that very few errors, if any, could be detected in the naming of the sorts. We should like either to see the most commonly adopted synonyms on the cards, or else one uniform name in the several collections; for instance, the Vicar of Winkfield in one collection is named *Le Cure* and *Monsieur le Cure*, which puts the novice or amateur a little out of his reckoning, for he can not detect any great difference between *Monsieur le Cure*, *Le Cure*, and the Vicar of Winkfield. The same remark will apply to several other varieties. The specimens of *Beurre Diel* were very large, and much admired. Eyewood we noticed as a peculiarly-formed Pear. There was much difference in the specimens from the several localities; so much so in some cases as to be difficult of identification. Such is always the case in an extensive assortment. The specimens of *Seckel* were few and small. The Apples had a splendid appearance. Several very choice specimens were on exhibition from Mr. French, Braintree. Medlars and Lemons were in small assortment. Some respectable specimens of Peaches were exhibited by Mr. Langley's and Mr. Prentice's gardeners.

N. Stetson's fruit was very select, and of good quality. A table of very well grown vegetables, also several large and fine Watermelons, from Mr. Morgan's gardener, Chas. Ingram, added to the useful department.

We fear to commence a notice of the ornamental. Where can we begin, or end, in the use of descriptives? We shall not commend; we can only enumerate, or at most particularize the new and rare objects, leaving the list of awards to give the owners due credit. First, as to baskets and bouquets, we shall be brief. We see little beauty at best in such masses of flowers, some like a broom-head or hair-mop, others so artistically arranged as to give us the idea that the sculptor had carved out the design, or the wax-molder molded the same. Every one to his taste. There were two baskets of indigenous flowers; one of them presented by Meehan & Sanders, per R. R. Scott, of Philadelphia, and the other from H. Tanner, gardener to Mr. Kent, Brooklyn. The *Victoria Lily* and *Nelumbium speciosum* leaves, flower, and seed-pod, were still attractive. The latter plant was never before exhibited here. It blooms luxuriantly in Mr. Cope's out-door aquarium, from which it was cut by Mr. Cope, and forwarded in good condition. The leaves of the great Lily were in a good state of preservation. Mr. Cope displayed his usual liberality on this occasion. Jas. Dundas, Esq., of Philadelphia, kindly contributed a collection of exotic Ferns, which were rare and valuable. Louis Menand's plants were now, as on former occasions, justly admired. Although brought from a distance, they had no appearance of having had a "hard road to travel." Several choice Epiphytes, Cape Heaths, and Ferns, were among them. His standard *Heliotrope* called forth general admiration. J. E. Ranch's select collection of hot-house and green-house plants, and many rare and beautiful variegated exotics, were objects of admiration to all visitors who had taste to appreciate his selection. A table of large and well-cultivated specimens were deposited by Martin Collopy, gardener to J. H. Prentice, among which were *Pitcairnia punicea*, *Dictyanthus pavonia*, a splendid plant of the Green Tea, and many others equally interesting. His *Cissus discolor*, though trained to a long, stiff stake, in an upright position, was nevertheless admired for its foliage; otherwise treated, it would have had a great effect. A plant of *Catasetum globbiflorum* was deposited from Mrs. Holbrook's collection, D. Scott, gardener. It was a very neat plant of the Orchid tribe. This is but a brief notice, with many important omissions.

A miniature garden, beautifully laid out with gravel walks, lawns of velvety moss, beds and clumps of plants and shrubbery; also an arbor and cottage, with all appendages to complete a villa residence, was deposited by H. A. Graeff, of Brooklyn, and formed a prominent feature in the very creditable fall exhibition. S.



PENNSYLVANIA HORTICULTURAL SOCIETY.—*Stated meeting, Oct. 17th.*—Dr. W. D. Brinckle, Vice President, in the chair. As there were few premiums offered on this occasion by the Society, the display of Fruits, Plants, and Flowers was not extensive, nor the attendance of visitors large. Pears and Apples were the objects called for by the printed schedule. The first premium for Pears was awarded to Isaac B. Baxter, for a collection in which we noticed the Duchess d'Angoulême, Easter Beurre (good specimens), White Doyennes, Duchess d'Angoulême, Passe Colmar, and others. Some handsome fruit of the Reine Claude De Bavay Plum were also deposited.

There was a pretty plant of *Dipladenia crassinoda* exhibited by J. Thomson, gardener to Mr. Tucker. Two collections of Dahlias were exhibited; one of them seedlings from Gerhard Schmitz' garden, several of which are deserving of notice, and another from R. Buists' nursery, named sorts, which included many fine varieties.

In the minutes of last stated meeting were a set of resolutions offered by C. Cope, Esq., one of which declares all members unqualified to act on committees as judges, from whose garden objects are from time to time exhibited for competition before society—*passed*. Also, that, in addition to the name of the gardener to any private gentleman, the name of the latter shall also be recorded.

The report of the managing committee of the horticultural department of the State Agricultural Fair was presented and accepted.

PROVIDENCE (R. I.) HORTICULTURAL SOCIETY.—This Society held its Fall Exhibition on the 13th of September. The exhibition, on the whole, was a fine one—fully equal to any previous show, though vegetation had suffered much in consequence of the extreme drouth. The following persons were the exhibitors of flowers:

From Geo. W. Chapin, by Geo. Anderson, a very pretty floral design and wall-piece; a very fine display of Roses, Asters, Verbenas, Dahlias, and other cut-flowers; also bouquets, Cockscombs, and a large display of green-house and pot plants, many of them rare, and most of them new to the Society's exhibitions. The committee note some of the more interesting, viz., *Dielytra spectabilis*, *Physianthus auricomus*, *Oncidium Carthaginense*, *Chorozema nana*, *Mutilon Newboldii*, *Gardenia Fortuni*, *Lycopodium umbrosum*, *Ceanothus azureus* and *pallidus*, *Salvia bicolor*, *Erica aristata*, *Azalea rosea punctata*, *Cassium arborea*, *Honocidium odoratum* major. From C. Allen, by D. O'Connor, a number of very beautiful hand bouquets; also, Asters, Dahlias, and a fine show of pot and green-house plants, viz., *Araucaria Brasiliana*, *Eugenia pimenta*, *Ruellia juncea*, *Polygala grandiflora*, *Camellia flumbriata*, *Lantana bicolor*, *Aloes*, *Fuchsias*, *Cacti*. From Wm. Nisbet, Elm Grove, a most superb display of *Celosia* (Cockscombs); also, a fine show of annuals and cut flowers, some showy green-house plants, such as *Fuchsias*, *Salvias*, tender *Roses*, *Eriens*, and *Cacti*. From A. D. & J. Y. Smith, by D. Cook, a fine display of cut flowers; also, bouquets and some fine green-house plants, viz., *Erica transparent*, *Lantana Bourlonea*. From Richard Dalglish, a number of fine bouquets; also, *Roses*, *Asters*, *Dahlias*, and other cut flowers. From Walter Craddock, a number of very beautiful bouquets; also, *Asters*, *Dahlias*, and other cut flowers. From S. Cornell, a fine show of *Dahlias* and *Asters*. From L. Staples, a good show of *Asters* and *Balsams*. From Silas Moore, of Cranston, a very fine display of hardly Perpetual *Roses*; also, *Dahlias*, *Asters*, and some fine bouquets. From J. D. Cook, a good display of *Dahlias* and *Asters*. From H. Tillinghast, *Dahlias* in varieties. From John Mumford, a good display of cut flowers. From Miss Staples, some fine *Asters* and *Balsams*. From Ezra Hubbard, a superb display of *Asters*; also, *Pansies* and other cut flowers. From Mrs. Peter Church, a very fine display of *Asters*. From E. B. White, a good show of *Asters* and *Cockscombs*. From John F. Driscoll, *Espirito sancto*—a very rare plant; also, a blue African Lily. From Wm. B. Spencer, of Phoenix, *Dahlias* and other cut flowers. From Miss Mary E. Hunt, wild flowers in variety. From B. W. Hendrick, of East Greenwich, some fine green-house and pot plants. From Geo. Hunt, *Roses*, *Asters*, and other cut flowers; also, wild flowers in variety. From Wm. McLeod, Millville, Mass., a very fine display of *Asters*. From Mrs. Dyer Cranston, *Asters* and *Gladiolus*. From Dr. Rivers, some fine pot plants.

Contributions were received from several individuals, viz.:

C. Eddy, W. Masters, Mrs. Day, P. W. Gardiner, H. M. Safford, J. F. Penno, H. Creighton, James Burns, H. Warren, H. Woodworth, Mr. Barstow, Jas. A. Potter, R. L. Rhodes, F. Woodward, W. H. Howard, Quincy Parker, C. M. Brown of Warwick, Mrs. Hathaway of Lonsdale.

The following premiums were awarded on fruits and vegetables:

FRUIT.—*Apples*.—For the best collection fall and winter, to Lewis Dexter, Smithfield, \$6; second best do. do., S. A. Larkin, Cranston, \$5. Best twelve varieties fall, D. H. Leonard, Seekonk, \$4. Best six do. do., Samuel Clarke, Smithfield, \$3. Best twelve do. winter, Silas Moore, \$4. Best six do. do., P. W. Arnold, Smithfield, \$3. Best dish fall, Cornelius Manchester, Fruit Hill, \$1. Best dish winter, Mrs. Joel Metcalf, Providence, \$1. *Gratuities*—Adam Anthony, North Providence, and T. Wilcox, Warwick, \$2. *Pears*.—For the best collection, fall and winter, Lewis Dexter, \$6. Best twelve varieties, John J. Stimson, Providence, \$4. Best six do., D. H. Leonard, \$3. Best dish of winter, Jas. A. Porter, Providence, \$1. Best do. fall, Geo. W. Chapin, \$1. *Gratuities*—To Geo. B. Peck and Silas

Moore, each \$3. To R. Dalglish and J. P. Smith, gardener to A. Duncan, \$2. *Peaches*.—For the best collection, D. H. Leonard, \$4; second best, Lewis Dexter, \$3; fourth best, James Lewis, Providence, \$1. Best dish, Charles Hadwen, Worcester, \$1. *Nectarines*.—For the second best collection, C. B. Manchester, \$1. *Quinces*.—For the best collection, C. S. Sweetland, Olneyville, \$2; second best, C. S. Sweetland, Providence, \$1. *Plums*.—For the second best collection, Mrs. Joel Blaisdell, Providence, \$1. *Grapes*.—For the best collection grown under glass with artificial heat, A. D. & J. Y. Smith, \$4; second best, G. W. Chapin, by Geo. Anderson, \$3; third best, Crawford Allen, \$2. Best dish do., A. Duncan, by J. P. Smith, \$1. Best collection grown under glass without artificial heat, fifteen varieties, Wm. Viall, \$4; second best, Dr. Ira Barrows, Providence \$3; third best, Dr. Bartlett, by S. Brinley, Smithfield, \$2. Best dish do., Wm. Nesbit, Elm Grove, \$1. Best specimens of most approved native varieties, Mrs. Peter Church, \$2. Best dish do., S. Cole, Warren, \$1. *Melons*.—For the finest specimen Watermelon, No. 84, \$2; second best, No. 98, \$1. For the finest specimen Muskmelon, No. 84, \$3; second best, G. W. Chapin, by Geo. Anderson, \$2. *Cranberries*.—Artificially raised by Edmund Bayley, of Usquepaug (South Kingstown), \$5, upon condition that he communicates to the Society full details of his method of cultivation.

**VEGETABLES.**—LEVI J. Blanchard, Smithfield, first premium on Drumhead Cabbage, \$3. J. Wilcox, Warwick, a gratuity of \$2. S. B. Haliday, a diploma for fine Flat Dutch and Bullockhead Cabbage; do., a gratuity of \$1 for improved Tomatoes; do., a gratuity of \$1 for best Blood Beet; also, a gratuity of \$1 for best round Turnips. C. Allen, first premium on Celery, \$3; also, first premium on Egg Plants, \$2; also, a gratuity of \$1 for best Red Cabbage. W. C. Snow, first premium on Savoy Cabbage, \$3; also, first premium on Squashes, \$2; also, a gratuity of \$1 for best Parsnips. W. Nesbit, first premium on Sweet Potatoes, \$2. E. A. Cole, a gratuity on Yellow Onions, \$1. J. D. Weed, North Providence, a gratuity of \$1 for Red Onions. W. Nesbit, best Red Onions, \$2. Stephen C. Swan, a premium of \$1 for Lafayette Beans; also, a gratuity of \$2 for choice White Potatoes. R. Dalglish, a gratuity of \$2 for Celery; also a gratuity of \$1 for large Squashes. G. B. Pettis, Johnston, first premium for Tomatoes, \$2. R. Dalglish first premium on Salsify, \$2. Jas. Lynch, Elmwood, a gratuity of \$1 for fine Turrip Beets. Jas. C. Swan, a gratuity of \$1 for White Potatoes. Dexter Asylum, best Sweet Corn, a gratuity of \$1. H. King, Cranston, a gratuity of \$2 for Dover and seedling Potatoes. Sam'l Carpenter, a gratuity of \$2 for do. do. No. 91, a gratuity of \$1 for fine Onions.

**EXHIBITION OF FRUITS AT MUSCATINE, IOWA.**—We take the following report of the Committee on Fruit from the *Muscatine Journal*:

The show of fruit this season owing to the late frosts of spring and the summer drouth, is very much inferior to what we should otherwise have expected, and falls below that of our last exhibition. In some localities, favored by their situation, the fruit though of much less yield, is very fine. We find on exhibition, of Apples, 44 varieties by J. B. Essex, of Illinois; 32 varieties by Hiram Gilbert, of Iowa; 63 varieties by James Cattelle, Iowa, and several varieties by Messrs. Thomas Morford, Wm. Chambers, Sen., Jacob Long, J. Sherfey, S. Smalley, and Hion. J. Williams.

The committee have construed the "best specimens of Apples," to mean the best specimens of the greatest variety of apples worthy of general cultivation in this locality, both from the character of the fruit and the bearing qualities of the tree. They have divided the apple into four classes, into the first of which they have elevated the Wine Sap, because the tree is a sure, constant and abundant bearer, and the fruit of the best second grade, while from the first class they have reluctantly deposed the Newtown Pippin, because the tree is a very shy bearer, late in coming into bearing and the yield very small.

Our examination has resulted in our conviction that Mr. Cattelle has presented a list of the best Apples of fine specimens and of the greatest number of the standard varieties, among which we would name a few, as the Rambo, white winter Pearmain, Roman Stem., Jennett, Newtown Spitzenburgh or Vandevere of Downing, American Golden Russet and Rhode Island Greening, which have proved themselves worthy of general cultivation among us. We regret to see our cultivators filling their grounds and bestowing their attention upon such indifferent fruit as the Pennsylvania Vandevere, Coishead, Milan, and their compeers which are always upon our tables and in our catalogues.

*Peaches*.—Five choice varieties of this fruit are upon our tables, with several seedlings. Three by S. Gilbert; three by J. Cattelle; two by Mrs. Ogilvie; three by J. Sherfey; three by J. B. Essex. Lot of seedlings by J. P. Walton, and one variety each by S. Smalley and Drury Reynolds, of Illinois. Some of the seedlings are very large but generally their flavor is inferior. The budded varieties free and cling are of superior size and flavor, but we could not be understood as in all cases recommending a resort to budding as having a tendency to render the tree less hardy and prolific. Mr. Cattelle has some very large peaches of the Newington variety preserved in diluted alcohol. We award the premium to Mrs. Ogilvie whose cling and free stones are of extra size and flavor.

*Plums*.—Very fine specimens of Coe's Golden Drop, are exhibited by Mrs. A. J. Fimple and Mr. Alex. Jackson. Those of the former are the largest, and entitled to the premium.

*Pears*.—Single specimens of this choice fruit are presented by Mrs. Ogilvie, Messrs. Cattelle, Sherfey, Long and Essex, but as they are all good varieties of their season, we cannot determine, and award no premium.

*Grapes*.—A fine specimen of Isabelas by S. Smalley, and ordinary ones of Catawba by Mrs. Ogilvie and Mr. Cattelle, the former having the finest display, we awarded the premium to her for the Catawba, and to Mr. Smalley for the Isabelas.

The Committee awarded the premium to Mr. Cattelle for the "best variety of fruit," his list including a fine sample of Apples, a good show of Peaches and Grapes, and one variety of Pear.

Mr. Essex, of Illinois presented for exhibition a large variety of apples, many of standard sorts, worthy of cultivation. Dr. Weed, (this morning) presented six standard varieties of the apple.



WORCESTER (Mass.) HORTICULTURAL EXHIBITION.—The Horticultural Exhibition this year, has been eminently successful, in every point of view. The long continued summer drouth, extending even into the autumn, had created serious fears of a partial failure. Many kinds of fruit seriously felt its effects, especially the Pear, the growth of which seemed almost suspended for some time, yet the subsequent favorable weather so nearly recovered them, that the fruit exhibition would compare well in quality with that of any former year, while in quantity, it was the largest exhibition ever made by the Society. We have not space for details, but will merely annex the list of Premiums:

**Fruit.**—*A. pios.*—For the largest and best collection, the first premium to Job C. Stone, of Shrewsbury, \$6; for the next to Samuel H. Colton, of Worcester, \$5. For the best ten varieties of not less than five specimens of each, to A. H. Allen, of Shrewsbury, \$5; for the next best, to Eli Johnson, of Worcester, \$4; for the next best, to T. W. Ward, of Shrewsbury, \$3. For the best six varieties of not less than five specimens each, do Peter Fay, of Southboro, \$4; for the next best, to C. W. Forbush, of Grafton, \$2; for the next best, to Jonathan Forbush, of Bolton, \$2. For the best eight specimens of one variety of autumn Apples, to J. H. Allen, of Shrewsbury, for Leland's Pippin, \$3; for next best, to Charles Johnson, of Northboro, for Porters, \$2; for next best, to S. H. Colton, of Worcester, for Maiden's Blush, \$1. For the best eight specimens of one variety of Winter Apples, to David S. Messinger, for Hubbardston Nonesuch, \$3; for next best, to Silas Forbush, of Grafton, for Peck's Pleasant, \$2; for next best, to W. H. Hersey, of Grafton, for Baldwins, \$1.

*Pears.*—For the largest and best collection, (58 varieties) the 1st premium to John Milton Earle, of Worcester, \$5; for the next (37 varieties) to Levi Lincoln, of Worcester, \$5. For the best ten varieties of not less than five specimens each, Edward Earle, of Worcester, \$5; for the next, to Ichabod Washburn, of Worcester, \$4; for the next, to George T. Rice, of Worcester, \$3. For the best six varieties of not less than five specimens each, to David S. Messinger, of Worcester, \$4. For the best eight autumn Pears of one variety, to F. T. Merrick, of Worcester, for Van Mons' Leon le Clerc, \$3; for the next to Wm. Greenleaf, for Seekels, \$2; for the next, to J. M. Earle, for Urbanistes, \$1. For the best eight winter Pears, of one variety, to Geo. W. Gill, for Passe Colmars, \$3; for the next, to George Forbes, Westboro, for Beurre d'Arenburgs, \$2; for the next, to Timo. K. Earle, for Seekels, \$1. *Gratuities* of two dollars were awarded to A. Underwood of Westboro, for his very good collection, and of \$1 each to Dr. J. Porter, of North Brookfield, for his collection; to Mrs. Henry Wheeler, for her fine dish of Duchesse d'Angouleme, and to Jonathan Forbush, of Bolton. The second and third premiums, for six varieties each, were not awarded, no one collection entitled to competition having that number of sufficient excellence. In the awards on both Apples and Pears, those having taken one premium on a collection, were excluded from competition for premium, on any collection of a smaller number of varieties.

*Peaches.*—For the largest and best collection, to David S. Messinger, of Worcester, \$3; for the next, to George A. Dresser, of Worcester, \$2; for the next, to O. B. Hadwen, of Worcester, \$1. For the best ten of one variety, to Asa H. Allen, of Shrewsbury, for Crawford's Late, \$2; for the next, to Lewis Bigelow, of Worcester, Crawford's Late, \$1; 50; for the next, to O. B. Hadwen, of Worcester, for Kenrick's Heath, \$1.

*Plums.*—For the largest and best collection, (10 varieties) to A. Underwood, of Westboro, \$3. For the best dish, to Charles Johnson, of Northboro, for Coe's Golden Drop, \$2; for the next best, Wm. M. Bickford, for do, \$1.

*Quinces.*—For the best collection, J. C. Stone, Shrewsbury, \$2. For the best dish, Charles Bigelow, Grafton, \$1.

*Grapes.*—For the best collection grown under glass, I. Washburn, Worcester, \$2. For the best specimen of Isabella Grapes, Curtis Forbush, Grafton, \$2. For the best native grape, to J. A. Moore, of Charlton, for the Fitchburg Grape, \$2. For Sweetwater Grapes, Charles Hale, Millbury, \$1. *Gratuities* of one dollar each, were awarded to Curtis Forbush of Grafton, and Moses Ruggles of Hardwick, for wine of the native grape, and to Joseph Lowell, Jr., of Worcester, for currant wine; to Curtis Forbush, and Ellis Bart of Sutton, for Cranberries; to P. D. Tiffany of Worcester, forripe figs; to Bond & Damon, of North Brookfield, for Concord Grape, and to Dr. O. T. Martin, of Worcester, for Catawba Grape.

**Flowers.**—For the best display of cut flowers, Wm. M. Bickford, \$2. For the best display of Green House plants, Ichabod Washburn, \$2; for the next, P. Dexter Tiffany, \$1. For the best pair of bouquets, I. Washburn, \$2; for the next, Henry Goulding, \$1. For the best Dahlias, P. D. Tiffany, \$1. For the best Asters, Mrs. Canfield, \$1. For the best display of Roses, Mrs. D. W. Lincoln, \$1. *Gratuities* of one dollar each, were awarded to Mrs. Wm. Greenleaf, for Dahlias; and to S. P. Champney, and Mrs. M. B. Green, for cut flowers.

**VEGETABLES.**—For the largest and best collection, Wm. M. Bickford, \$4; for the next, I. Washburn, \$3. For the best Seedling Potatoes, Eli Johnson, \$2. For the best Marrow Squashes, C. W. Forbush, \$2. For the best Celery, I. Washburn, \$2. For the best Savoy Cabbages, C. W. Forbush, \$1. For the best Cabbages, other than Savoy, A. H. Allen, \$1. Best Pumpkins, Eli Johnson, \$1. Best collection of Turnips, E. M. Banning, \$2. Best table Beets, I. Washburn, \$1. Best stock Beets, E. M. Banning, \$1. Best sweet Corn, Wm. M. Bickford, \$1. *Gratuities* of \$1 each were awarded to O. B. Stevens, for three squashes raised on one vine, weighing severally 44, 59½, and 73½ lbs., aggregate 171 lbs.; to J. R. Pierce of Worcester, for 3 squashes, weighing 42, 59, and 62½ lbs., and to Wm. E. Norcross, of Shrewsbury, for 4 of similar size, but of which the precise weight was not indicated.



**CAYUGA COUNTY HORTICULTURAL SOCIETY.**—The September exhibition of this Society was held at Stanford Hall, in the city of Auburn, on the 20th. The following is a list of the premiums awarded:

**FRUITS.**—*Apples.*—Best twenty varieties, S. S. Graves; second best, H. S. Dunning. Best six varieties, W. D. Osborn. Best one variety, S. S. Graves. *Pears.*—Best twelve varieties, S. S. Graves; second best, H. B. Rathbun. Best three varieties, H. B. Rathbun. Best one variety, Wm. Cutting. *Peaches.*—Best ten varieties, S. S. Graves. Best three varieties, H. B. Rathbun. Best one variety, B. B. Clapp. *Plums.*—Best one variety, S. S. Graves. *Quinces.*—Best variety, H. H. Bostwick. *Grapes.*—Foreign—Best three varieties, H. B. Rathbun. Best one variety, D. M. Osborn. Native—Best three varieties, H. B. Rathbun. Best two varieties, Wm. Cutting. Best one variety, D. O. Baker. *Watermelons.*—Best two varieties, J. Ives Parsons. *Citrons.*—Best three varieties, S. Blackhurst. *Best and greatest variety of Fruit,* S. S. Graves.

**FLOWERS.**—*Plants.*—Best six varieties in pots, Wm. Osborn. *Dahlias.*—Best twenty varieties, P. R. Freeoff. Best twelve do., P. R. Freeoff; second best do. do., J. H. Chedell. Best six do., P. R. Freeoff; second best do. do., S. Blackhurst. Best specimen bloom, P. R. Freeoff. *Roses.*—Best twelve varieties, S. S. Graves; second best, P. R. Freeoff. Best six varieties, P. R. Freeoff; second best, S. S. Graves. Best single Rose, W. Osborn. *Verbenas.*—Best twenty varieties, P. R. Freeoff; second best, W. Osborn. Best twelve varieties, W. Osborn; second best, H. T. Dickinson. Best six varieties, W. Osborn. Best seedling never before exhibited, P. R. Freeoff; second best, J. Ives Parsons. *German Asters.*—Best display, Mrs. B. Sheldon; second best, P. R. Freeoff. *Phloxes.*—Best display, S. Blackhurst. *Petunias.*—Best 4 varieties, W. Osborn; second best, S. Blackhurst. *Bulbams.*—Best display, Mrs. Burtis; second best, P. R. Freeoff. Best display of annual and perennial flowers, W. Osborn; second best, P. R. Freeoff; third best, S. Blackhurst.

**BOUQUETS AND FLORAL DESIGNS.**—Best round bouquet for centre table vase, P. R. Freeoff; second best, Wm. Cutting. Best flat bouquet for mantel vase, P. R. Freeoff; second best, H. H. Bostwick. Best and most beautiful round hand bouquet, W. Cutting; second best, P. R. Freeoff. Best and most beautiful flat hand bouquet, P. R. Freeoff. For greatest number of bouquets, P. R. Freeoff; second greatest number, S. Blackhurst. Best and most beautiful basket bouquet, Miss Laura Osborn. Best and most beautiful floral design, Mrs. S. A. Goodwin; second best, Mrs. William Osborn; third best, P. R. Freeoff.

**VEGETABLES.**—*Potatoes.*—Best Seedling, they award to O. Howland subject to his report; best  $\frac{1}{2}$  peck, J. R. Page; second best, Edmund Grant. *Squashes.*—Best two specimens (sweet potatoe variety,) Edmund Grant; second best, H. B. Rathbun; third best, Edmund Grant. *Beets.*—Best long blood, Wm. Cutting; second best, Edmund Grant. *Carrots.*—Best, J. M. Sherwood; second best, S. S. Graves. *Parsnips.*—Best, J. M. Sherwood; second best, Edmund Grant. *Egg Plant.*—Best, Edmund Grant; second best, S. S. Graves. *Cabbages.*—Best, Edmund Grant; second best, J. Ives Parsons. *Cauliflowers.*—Best, Dr. Theo. Dimon; second best, W. D. Osborn. *Celery.*—Best, J. M. Sherwood; second best, E. Grant. *Tomatoes.*—Best, Fred. Prince; second best, E. Grant. Best exhibition of different kinds, S. Blackhurst; second best, J. M. Sherwood. *Lima Beans.*—Best, W. D. Osborn; second best, H. H. Bostwick. *Cucumbers.*—Best, J. M. Sherwood; second best, S. Blackhurst. *Green Corn.*—Best, E. Grant; second best, S. Graves. *Peppers.*—Best display, W. Osborn; second best, J. Brown. *Onions.*—Best, E. Chamberlain; second best, Wm. Cutting. Best display of vegetables, E. Grant; second best, William Cutting; third best, S. Blackhurst.

They award a diploma to Mr. J. Waldron for a fine display of ten varieties of potatoes.

They also award a diploma, to Frank McCarty, gardener for Mr. S. Blatchford, for a fine specimen of cucumber it being two feet ten inches long.

Also a diploma to Anthony Ovington, gardener for Rev. Dr. Cressey, for some fine specimens of "Ochre."

Also a diploma to John Benschaw, gardener for J. M. Sherwood, for two varieties of sweet potatoes.

Report of the committee on discretionary premiums.—To Miss Bartlett, for a case of wax work, artificial fruit, \$1. To Mary E. Richardson for a picture frame of embossed leather, Vol. Trans. To Stephen Sumrix, for a basket work stand, Vol. Trans. To L. D. Stone, for a cage of Java Sparrows, Vol. Trans.

**MASSACHUSETTS HORTICULTURAL SOCIETY.**—The Society met on Saturday, October 7th. On motion of W. C. Strong, it was resolved that a committee of three be appointed by the chair to consider the expediency of employing lecturers to deliver lectures before the Society.

On motion of E. M. Richards, the thanks of the Society were presented to F. Lyman Winthrop, Chairman of the Committee of Arrangements for the Annual Exhibition, and to the members of the Committee for the satisfactory manner in which they have discharged their duty.

Geo. W. Collamore of Boston, and William Plumer of Lexington, were proposed as members.

The President announced that this was the day prescribed by the Constitution for the election of officers. E. M. Richards and P. B. Hovey were appointed tellers. The Committee subsequently reported that the old list of officers was re-elected.

E. M. Rand, Chairman of the Special Committee appointed in July last, to take into consideration the matter of the awards to Hovey & Co., and the report of the Committee thereon, with

resolutions of censure, moved that the said Special Committee be discharged from the further consideration of the subject. Adopted.

On motion of Mr. Rand, it was resolved that a committee of three be appointed by the Chair, to inquire if any further action in the premises is necessary. The Chair appointed Messrs. Rand, J. S. Sleeper and Josiah Stickney to constitute the committee.

Mr. Rand read the draft of a by-law, which he had drawn up to prevent the recurrence of a similar cause of complaint, to the effect that no member of a committee should be present with the Committee, or take part in their deliberations or discussions, when any article presented by him for premium or gratuity was under consideration.

Mr. B. V. French reminded the mover that the Society had already appointed a committee (of which Mr. French is chairman) to report alterations in the by-laws to meet the case. Mr. Rand's amendment was, at his own suggestion, referred to this committee.

On motion of Samuel Walker, the President (J. S. Cabot) and E. S. Rand were added to the Special committee on alteration of by-laws.

Mr. Joseph Breck, who had been re-elected chairman of the Flower committee, declined to serve another year. On motion of Mr. Walker, (who testified to Mr. Breck's long and acceptable service on the committee) Mr. Breck was excused from serving, and Mr. F. Burr was elected by acclamation, chairman of Flower committee. Mr. J. F. C. Hyde was added to the same committee.

William Todd of Roxbury was elected a member of the Society. Adjourned to Oct. 21.

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**TOMPKINS COUNTY HORTICULTURAL SOCIETY.**—The following is the list of officers for the ensuing year:

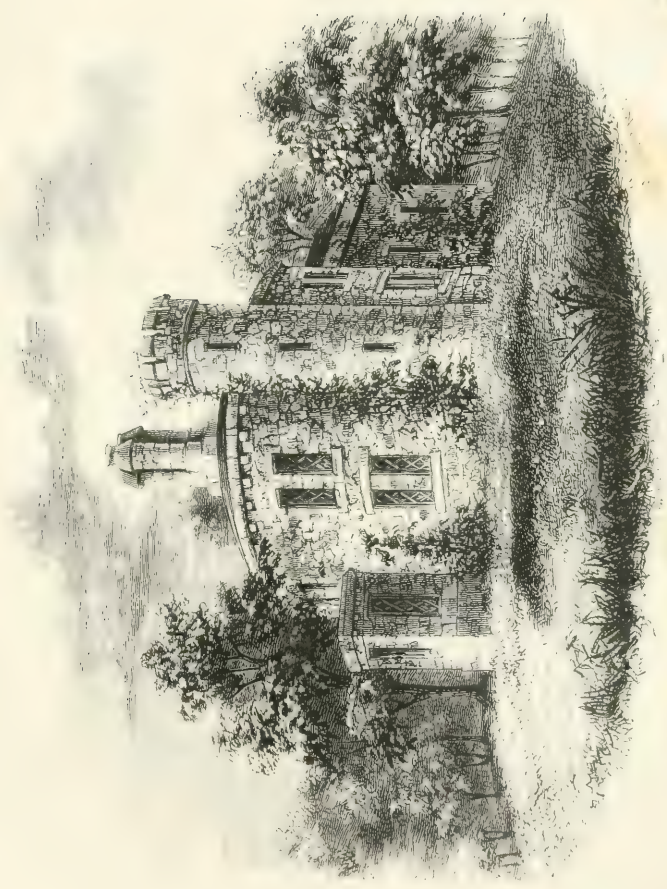
*President*—HERMON CAMP. *Vice Presidents*—BENJAMIN G. FERRIS, ELBERT CURTIS, THOMAS ROBERTSON, HENRY BREWER, JAMES PUFF. *Executive Committee*—GEORGE P. FROST, FRANK ATWATER, ANSON BRAMAN, HERVEY PLATTIS, HENRY F. HIBBARD. *Treasurer*—ANSON BRAMAN. *Corresponding Secretary*—HARVEY A. DOWE. *Recording Secretary*—ALFRED WELLS.











H. 111.

ARTIST'S SKETCH





## Pears on Quince Stocks.

THE winter of 1853-4 will be remembered in many parts of the country, as having been remarkably disastrous to Pears on Quince stocks. Large numbers of trees were totally lost, and many others were very seriously injured; so much so, that they continued to die off at intervals during the early part of the summer. These injuries were experienced throughout a large portion of this State,—in some localities more severely than in others. They extended westward to Michigan, and in some parts of that State were very great. Such an unprecedented loss, felt simultaneously in several sections and States, could scarcely fail to create alarm; and what we may call a *panic* actually did prevail for a short time. Newspapers and individuals hastily, without for a moment investigating the causes which led to the disaster, pronounced the Quince stock unadapted to our climate; declared that it should be abandoned; and that we must, as in former times, place our reliance on Pear stocks. Persons who had recently made large investments in orchards of dwarf Pear trees, others who contemplated such investments, and many of those who had planted fruit gardens, and those who were about to plant, made anxious inquiry on the subject; and not a few whose apprehensions were most strongly awakened, set at once about planting Pears on Pear stocks, to take the place of those on the Quince.

Now we propose to show that there are not, nor were, any real grounds for alarm; and also to suggest some means of preventing a recurrence of injuries from the same causes. That there was no real cause for alarm, we assume simply on the ground that such a disaster had not occurred before in this country. We suffered seriously around Rochester,—quite as seriously, perhaps, as in any other locality,—and yet, during our experience of fifteen years engaged in extensive cultivation, we do not remember having lost a single Pear tree on Quince, on account of the Quince having suffered from the effects of winter. During that period we have experienced one or more winters of such intense severity that the “oldest inhabitant” could not remember an equal; yet out of hundreds of thousands of young Quince stocks, standing in exposed nursery rows, and of acres of trees of various ages from one to ten years, we are not aware of having lost one from the effects of the winter upon the stock, up to the disastrous period of which we write. Indeed, we have often taken occasion to remark, that the nurserymen and fruit growers of this country had great reason to be thankful to HIM who rules the seasons, for their favored exemption from those oft recurring periodical calamities experienced in other countries, from extraordinary degrees of cold, and other destructive phenomena.

Who has not heard of the destruction of whole Orange plantations in the South, and even in Italy, from extreme cold. In various parts of Europe, we hear of trees and shrubs, usually quite hardy, totally cut down over wide spread sections of country, from some unusual or unseasonable cold. No longer ago than last spring, the whole fruit crop was cut off in most parts of England and Scotland, and thousands of young

trees — Cherries, Apricots, Peaches, and even Plums — were totally lost. Ornamental trees and plants suffered from the same cause, and thousands of specimens of many years' growth, and great value, were lost. The English horticultural journals have not yet got through with publishing the results. The vine disease in Europe is another one of those occasional misfortunes which befall the cultivator, and which no human foresight can anticipate or ward off. We have heard of a minute beetle, so minute as to be almost invisible to the naked eye, making its appearance all at once, and carrying destruction into whole regions of Pine forests. The blight known as "*the fire blight*," which for the last seven or eight years has committed serious ravages on the Pear tree in various localities, moving about and shifting from place to place in a most mysterious manner, is another of those disastrous visitations. These are things that rational men will expect, just as much as they do hurricanes both by sea and land, hail-storms, floods, and drouths. The cultivator, of all other men, must continually feel himself at the mercy of the elements,—he can never count with safety upon a crop until it is gathered : and it is perhaps well for him that this is so ; for it reminds him that, notwithstanding the wondrous works of his enterprise, industry, and skill, he is still powerless as a child in foreseeing or guarding against the extraordinary phenomena of nature. In one night, or day, or hour, or even in one minute, the labor of years is swept off, and all he can do is to shake his head, and say, alas !

But men now-a-days are not easily discouraged. Would we not all agree in pronouncing it the height of folly, in English nurserymen and planters, to abandon the cultivation of all trees that suffered by last spring's frosts ; or in plant-growers to abandon plant-culture, because their glass roofs have been all smasked by a hail storm ; or in the Orange-growers of Genoa to cease their culture, because a severe winter occasionally destroys their crops, and even their trees. To abandon the use of the Quince stock, merely on account of the destruction of last winter, would be no less a folly ; for such circumstances as led to it may not happen again during the lifetime of any one now living.

And now, what were the circumstances ? Judging from our own observations here, and the accounts of persons in some other localities, we believe them to be these : In the month of January we had first a severe cold, which, in the absence of snow on the ground, penetrated it deeply ; then came a slight fall of snow ; and then a thaw. The thaw for a day or two was rapid ; and just as the snow was all melted, and the ground about half thawed, intense cold set in all at once. The whole surface of the ground was covered with water which could not get down, and this water was suddenly converted into ice, so that one might have skated for miles over the country ; the wind blew a perfect hurricane at the same time, so that our men who were at work pruning in the nursery were compelled to quit, as they found it impossible either to face the cutting wind or to keep their feet on the ice ; our teamsters, even, who are seldom deterred by the weather, "hailed off." We never saw such a dismal time. Evergreens, that in the coldest weather have usually an aspect of warmth and comfort, were pictures of distress ; their branches and leaves were frozen stiff, and looked dried up, instead of yielding as usual to the blast ; their

small branches and leaves were broken one against the other, so that the ground beneath seemed as though the trees had been beaten with sticks. It was at this period, beyond a doubt, that the Quince stocks suffered. Standing first in water, then in ice which bound them with its iron grasp to full six inches below the ground level, with not a flake of snow on the ground, the wind blowing a hurricane, and the thermometer eight or ten degrees, or more, below zero,—was not this a trial for a tree which is not a native of the frozen zone? The cold, intense as it was, would not have inflicted the least injury, had it not been accompanied with a boisterous wind. Of this we are perfectly satisfied: because trees standing in low, sheltered places, escaped completely; while on all high ground, knolls, &c., the destruction was very great. In our home grounds, which are sheltered by a high, abrupt eminence on the west side, not a tree of any age, among many thousand Pears on Quince, was injured in the slightest degree; while on a distant part of the nursery, fully exposed, *all* the Quince stocks on the high ground suffered, and *all* on the low ground escaped. A very slight inclination from the wind quarter acted as a safeguard. Several cultivators, observing that the trees suffered on the highest ground, imagined that it was the dryness of the ground that led to the injury; but this was a misapprehension, for trees in the driest grounds we have, but sheltered, escaped wholly. Others thought that some varieties were more generally injured than others; but our observations induce us to believe that the injury was in proportion to the exposure, and to the proportion of the Quince stock that stood in the water when the freezing commenced. The part above the water and ice line, was, we believe, safe in all cases. In heavy clay ground, so compact as to shed the water off its surface, instead of imbibing it, as light sandy ground did, the trees escaped with less injury.

The Quince fortunately possesses one property which greatly diminished the aggregate of the loss, and that is, its tenacity of life. In many cases where the roots were completely browned, as though they had been exposed to the air for six months, and the trees to all outward appearance worthless as so many pea-sticks, new roots were emitted through the dead outer bark of the old ones, and the trees grew well,—in many cases where the stocks were stout and vigorous, surprisingly well. It was some days after we commenced digging and packing in the spring, before we discovered that any roots were effected, and then our attention was drawn to it by a neighbor who had accidentally made the discovery. We had then sent away some of the most seriously damaged trees. One lot was sent to a gentleman some sixty miles west of Rochester, and he wrote us back that they were all dead. We sent him others, and desired him to send back the *dead* ones, which he did. They did look bad, certainly; but under the blackened outside bark we found the roots generally sound, and thought we would give them a chance for their lives. So we planted them with many others in the same condition, and we do not believe that five trees out of the hundred died; and they have, notwithstanding the past very dry summer, made a good growth. This result has been experienced by other cultivators in various localities; and we think that if all damaged trees had been taken up, pruned, and replanted, they would have been saved: or even if they had been *pruned*—that is, if the tops



had been reduced to lessen the demand of leaves upon the weakened roots—that they might have been all saved. This, however, was not thought of by many; and the tops being left entire while the roots were in a great measure destroyed, the tree was unable to sustain itself until new roots were formed; and as soon as growth commenced, and warm weather set in, the trees perished.

This misfortune, like most others of a like nature, has taught us something which we trust will not be allowed to pass unheeded:

First, The importance of shelter, which we have heretofore urged strongly through the pages of this journal. Every day's experience strengthens our conviction that, in this country, it is one of those requisites which should receive the earliest attention of every cultivator, and which can not be overlooked with impunity. In the case of last winter's destruction to the Quince, we have seen that in most localities it proved a perfect safeguard.

Second, We have tested the advantage of mulching, or protecting the roots of trees against the effects of intense cold accompanied by a driving wind where snow seldom lies long. If in the worst places the roots of the Quince had been covered with three or four inches deep of mulching, decayed leaves, manure, sawdust, tan, or anything that would have excluded the wind, all would have been safe. We found that, where the young trees in the nursery rows were well banked up with earth from the plow, so that all the stock was covered two or three inches deeper than usual, they escaped. We therefore advise mulching all dwarf Pears, and especially all those in exposed situations, before winter sets fully in; and we should do this even if assured that we should never have so severe a winter as last. The roots of the Quince are spread out near the surface—not running down deeply, like those of the Pear. We found that all Quince roots *below* a certain depth were safe last winter.

Third, If trees do suffer from some cause that can not be averted, we must not fold our arms in despair and see them die; but, on the first symptom of injury, search out the seat of ailment, and apply a remedy. We have shown that some little precaution might have saved thousands of trees that were allowed to perish without a helping hand being extended. If a horse is taken sick, or meets with an accident, we do not let him die without making an effort to save him, and then cry out we shall have no more horses.

## ON RAISING FRUITS FROM SEED.

No man, either in Europe or America, who has any knowledge of the fruit-growing capacities of the United States, entertains the slightest doubt but that we are to be the greatest fruit-growing and fruit-consuming people in the world. Even now, in the very morning of our national existence, with the stumps of the primeval forests yet standing thick around us in the oldest States, fruit-culture has acquired such an importance as it never has attained on the other side of the Atlantic. *There*, the few grow and consume fruits; *here*, the *million*. This is no empty boast, although some-

thing to boast of, but a simple truth. In this country there are few *tenants*; all, or nearly all, are proprietors, and have all the encouragement which belongs to the indisputable ownership of the soil. Added to this, is a vast territory, fertile soil, and a climate varied in such a manner that here we can succeed with one class of fruits, and there with another. Within the present boundaries of these United States, all or nearly all, the fruits cultivated for the use of man can be grown successfully *in the open air*.

All our experience, up to the present time, teaches us that our success in a great measure depends upon having varieties perfectly adapted to sectional or local circumstances, such as soil, climate, &c. Some varieties admit of a much wider diffusion than others, but *none* are *everywhere* successful. This fact is settled pretty well. The great work of the day, is that of ascertaining what varieties are best adapted to certain localities. This is very well, but not enough; knowing what peculiarities our soil and climate require, we must aim at *originating* varieties possessing those peculiarities. This is a department of labor to which we earnestly commend every cultivator. By sowing the seeds of those varieties which come the nearest to what we want, we stand a great chance to make improvement. Our best native fruits are chance seedlings from the best old sorts. In many cases their parentage is obvious. Even in Europe a large number of the new varieties have been obtained from seed of the best old sorts: the family connection is plainly traceable by observing cultivators.

Without following this subject further at present, we will give the views of an eminent cultivator and pomologist, the Hon. MARSHALL P. WILDER, in his address before the Pomological Society at Boston, on the 13th of September last:

*"My next suggestion relates to the production from seed of new varieties of fruits adapted to particular localities, or to general cultivation.*

"The immense loss to American cultivators, from the importation of foreign varieties, in many instances not well adapted to the countries from which they come, and often still less adapted to our soil and climate, suggests the importance of raising from seed, native sorts which, in most instances, possess peculiar advantages. It is now generally conceded that the trees and plants of a given country, like its aboriginal inhabitants, will flourish better at home than in most foreign localities.

"We rejoice that public attention has been turned to this subject by some of our horticultural journalists, and that many cultivators and amateurs are engaged in this interesting and promising department. The success which has crowned their exertions affords great encouragement to perseverance. Witness, for instance, thirty or more varieties of the Cherry, by Dr. KIRTLAND, of Ohio, which appear adapted to our eastern climate, and some of them of superior excellence. Witness the numerous varieties of the Raspberry, by Dr. BRIDGEB, Ex-President of this Society, of which, some have endured, without covering, the severities of the last winter in the New England States, and which also promise to be valuable contributions to American pomology. In addition to these, how many new varieties of the Apple, the Pear, the Plum, and the Grape have recently been added to the list of American fruits. How many new and excellent varieties of the Strawberry have appeared since the introduction of Mr. HOVEY's seedlings.

"These are sure indications of the success which will reward future efforts to obtain

valuable and native varieties of fruit; and they point to the fulfilment of the prediction of the celebrated VAN MONS, "that the time will come when our best fruits will be derived from seedlings." He gives the following sage counsel to his correspondents, to whom he had sent trees: "*Sow your seed and persevere without interruption, and you will obtain even better fruit than mine.*"

"Among pioneers in this department, I am happy to notice a gentleman, (now residing among us) the pupil and friend of VAN MONS, one who has adopted our country as his future home, and who has already transplanted to our soil many thousand choice seedlings of the Pear which have come into his possession from the collections of that gentleman and the celebrated ESPEREN.

"As to the best method of producing fine varieties from seed, the opinions of distinguished pomologists are not uniform.

"DUCAMEL, among the French, from causes which seem to us irreconcilable with nature and experience, entertained serious doubts of the practicability of any method for obtaining new and valuable varieties from seed, especially of the Pear, because he had tried various experiments without success, for fifty years.

"Dr. VAN MONS, of Belgium, instead of saving the seed of the *finest* varieties, selected those of inferior sorts, upon the principle that a kind having arrived at the highest state of perfection must deteriorate, while an inferior one would improve by successive reproductions. He also held that hybridization tended to degeneracy and imperfection. Thus he assumes the doctrine that a perfect variety necessarily deteriorates, and also overlooks the fact observed by other distinguished men, that the improvement or deterioration of which he speaks, may result from natural impregnation by the pollen of other varieties conveyed by the air or insects, and therefore that the seed of a good variety may produce either a better or a worse, and that of a bad either a worse or a better.

"Mr. KNIGHT's system of obtaining new and improved varieties, depended entirely on hybridization or artificial impregnation so lightly esteemed by Dr. VAN MONS. This is somewhat difficult to practice on account of natural fertilization by insects and the wind; but it has the merit of depending on a truly philosophical principle, and with very particular attention may yet prove as available for the improvement of our fruits as it has for the production of fine varieties in the vegetable and floral kingdom, or as the corresponding principle has in the crossing of the breeds of domestic animals.

"The results of Mr. KNIGHT's experience disprove the tendency to degeneracy, inasmuch as many of his fruits, obtained by hybridization, are among the most durable and hardy varieties, as the *Egerwood* and *Dunmore* Pears; the *Black Eagle*, and other Cherries.

"Many cultivators, as ESPEREN, BIVORT, BERCKMANS, and others, both in this and foreign countries, have sown seeds in variety, and have obtained some valuable sorts. But I am confirmed in the opinion, that the best means of producing new and excellent varieties, suited either to general cultivation or to particular localities, is to *plant the most mature and perfect seed of the most hardy, vigorous, and valuable sorts*; on the general pathological principle that like produces like, and upon the conviction that immature seed, although the embryo may be sufficiently formed to vegetate, yet not having all its elements in perfection, it will not produce a vigorous and healthy offspring. Dr. LINDLEY, commenting upon this practice, justly remarks: "All experience shows that in every kind of created thing, be it man or beast, or bird, the mysterious principle, called life, remains during the whole period of existence what it was at first. If vitality is feeble in the beginning, so it remains. Weak parents produce weak children, and their children's children are weaker still, as imperial dynasties have sadly shown." With him we believe this theory as applicable to the



vegetable as to the animal kingdom. May not a disregard of this doctrine account for the great number of feeble, sickly, early defoliated trees often found in our grounds by the side of those that are vigorous, healthful, and persistent in foliage? Is not the theory we advocate as important in the production of fruit trees, as in the raising of cereal grains? The skilful agriculturist saves the best seed of his various crops, and selects the best animals from his flocks and herds for breeders. Why should not this law of reproduction regulate the practice of the pomologist as well as of the farmer? Has the ALL-WISE and INFINITE enacted several laws where one would subserve the purpose?

"To the doctrine of VAN MONS, and other distinguished writers, respecting deterioration by age, and after a variety has reached its perfection, there seem to be some exceptions. From the accounts of oriental travelers, may we not believe that the Grapes of Eschol are as perfect now as when the chiefs of Israel plucked their rich clusters three thousand years ago? and that the same variety of the Fig, the Olive, and the Pomegranate, are as perfect in Syria to-day as in the period of DAVID and SOLOMON? It is worthy of inquiry whether the native Grapes, on the banks of our rivers, have deteriorated since the day when the red men of the forest refreshed themselves with fruit from those vines, and whether the Orange, the Lemon, the Bananna, and the fruits of southern latitudes, evince any more signs of decay than they did centuries ago? In a word, whether this doctrine of deterioration is as applicable to the *native* as to the foreign fruit of a country?

"Why may we not expect to obtain natural varieties of the Apple, and other fruits, as durable and far more valuable than those which have passed their second centennial, as the *Endicott* and *Stuyvesant* Pears? From meteorological or other causes which we do not at present understand, particular varieties may deteriorate in a given locality, for a season, and afterwards revive; or, they may show signs of decay in one locality and flourish well in others not very remote, as the *White Doyenne*, which has been considered, for many years, by some in this vicinity, on the decline, while it is perfect in several places in Maine, New Hampshire, Vermont, and other States. Fruit-bearing may exhaust the vital energy of the tree, and hasten decay, but still the variety may remain. We have, among fruit trees, no example of longevity equal to that of the new *Taxodium*, found in California, supposed to be three thousand years old. Our object is not to controvert the opinions of those who believe in the running out of varieties, whether their duration be limited to one hundred or one thousand years, but to enforce the importance of raising new varieties from seed, especially adapted to our own location."

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### THE ROSE GEANT DES BATAILLES, (GIANT OF BATTLES).

IN our last number we gave a drawing and description of one of the finest of all the light-colored Hybrid Perpetual or Remontant Roses, the *Caroline de Sansal*; now we present a portrait of the best and most brilliant crimson variety of the same class, the *Giant of Battles*. It is not a new Rose now; it has been seven or eight years in cultivation, and no doubt is as well known to many of the readers of the *Horticulturist*, as it is to ourselves. It has been well proved to be a first rate Rose, and therefore we feel safe in recommending it to every one who does not possess it, and who wants to add one other variety of the Remontant class to their collection.

The plant is of low, dwarfish habit, though perfectly healthy and robust. It blooms quite young, and, when well treated, is scarcely ever out of bloom from the middle of June to the middle of October. Its dwarf, compact habit, makes it one of the very best hardy ever-blooming varieties for bedding out; that is, for forming groups or masses on the lawn after the manner of Verbenas and other bedding plants. *Augustine Monchelet*, one of the oldest dark rose or crimson colored varieties, is also an excellent variety for this purpose. There are others, such as the *Comte Bobrinski*, *Standard of Marengo*, *Marquis Boccella*, &c., &c., which we might place in the same category.

Every year adds new varieties to this class of Roses. Since the introduction of the *Geant des Batailles*, probably not less than one hundred, good and bad, have been sent out by the French rose-growers and nurserymen. Many of them scarcely ever saw the light of day; others, with sounding names, had a temporary run, and fell back into obscurity. A few really good ones have been obtained, but in color none has yet come up to the *Giant*. As our correspondent, Mr. RIVERS, one of the best informed rose-growers of this age, said in a recent communication, this variety seems to be the acme in color. "Thus far, and no farther."

The *Standard of Marengo* is a very brilliant Rose, *fiery crimson*; but not more than semi-double, and too evanescent.

The *Comte Bobrinski* is also a brilliant Rose, almost scarlet; but in form, substance, and durability, not to be compared with the *Giant*.

*Auguste Mie*, proves to be a very excellent freely remontant variety, a rich rosy-scarlet, like the *Coup de Hebe*.

*Baron Hallez* is a fine light crimson variety, a good grower, and free bloomer. Like the *Giant of Battles*, this variety is quite double, and the petals beautifully imbricated.

*S. Lion des combats* is a new brilliantly colored Rose of much promise. It is of a reddish-scarlet.

We shall go no further now among names, but close with a word or two about culture.

We have some reason to believe that few people are so generous in the treatment of their Roses, as they should be. Almost every one will admit that the Rose should have a rich soil; but *how rich?* is the question. To be as specific as possible, we will say that we never knew a rose-bed too rich. Some plants will run all to leaves and wood, if too highly manured, as our friend PARDEE says the Strawberry does; but the Rose does not. The Perpetual Rose, to bloom constantly, must grow constantly; for it is the young wood, and that only, which gives the Roses. To make a rose-bed or border that would produce a satisfactory display of Roses, a soil two feet deep, made of half sod from an old pasture, and half old hot-bed or well-decayed stable manure, thoroughly incorporated, may safely be recommended. A rose-soil should be pretty compact; that is, it should have in it a pretty large proportion of clay. The roots of the Rose, as is well known, have few fibres, depending on a few large roots, and these in a light soil are neither sufficient to hold it in its place, nor to take up a

sufficient supply of food. A *stiff, moist*, (but well drained,) and *rich soil for the Rose*. Those whose rose-bed or borders are suffering from poverty, should at once take up the plants, prune them, and improve the soil. If this be altogether too much trouble, give them a liberal top-dressing of *night-soil* this winter. Don't be afraid of having your rose-soil too rich.

## REMARKS ON COLD GRAPERIES.

BY A. HUIDEKOPER, MEADVILLE, PENN.

THE *Horticulturist*, in a former volume, having treated its readers to a series of articles from the fathers in Grape-culture, I propose to add a chapter of observations from a young beginner.

In the spring of last year, I had a small grapery constructed only twenty by twenty-two feet in size, with a span roof on a north and south line. Eight-by-ten-glass was used, of double thickness. In putting in the glass, it was made to lap about half an inch. This was an error; a lap of half as much, according to the book, answering a better purpose. The north end of the building contained a door and one window of six lights, eight-by-ten glass; the south end, two windows of same size; the east and west sides, the walls of which are four feet high, have sashes the width of a single light of glass, hung on hinges, and opening vertically; the sashes in the end of the building opening horizontally, also on hinges; and all of them supplied with hooks and eyes to fasten them when open or shut. The main glasses of the roof are fastened in their places, and a row of small sashes, the entire length of the building, are hinged upon the ridge pole for ventilation, secured as far as practicable with tin and canvass, to prevent drip. They are opened with a rod, with a hook on the end of it, passing through an eye in the sash frame, and a wire loop in the side of the pole, which passes over a bolt or screw in a bar across the rafters. By having several such loops, the sashes can be opened more or less at pleasure. I seldom open any of the top windows until the weather becomes very warm, and then a part of them may be left open permanently during the summer. Generally I find the end windows sufficient for ventilation, and over these I have wire screens fastened, to prevent the wind blowing through with too much violence. Wires are passed from the plates to the ridge pole with cross wires, for convenience in tying up the vines. These are about fifteen inches from the glass. The house rests upon stone pillars, three on each side; and the walls are filled with dry tan between the lining and weather-boarding. It is furnished with tin cave-troughs. The cost of the entire structure, when painted and finished, was one hundred and fifty dollars. The only remark I have to make, is, that it would be better, in building, to have a larger house, as the expense is not in the same ratio as the size.

I removed a hard clay soil to the depth of two and a half feet, and came on one side to gravel, which I concluded would make a sufficient drain. I filled up under the



barrels for about a foot, and then put a layer of stones, bricks, bones, &c., and then filled up the entire excavation with a composition of stable and chip manure with river sand, to which a bushel or two of lime and ashes had been added, and the whole intermixed some months before.

I obtained, early in April, from Messrs. ELLWANGER & BARRY, vines of the *Muscat of Alexandria*, *Royal Muscadine*, *Pitmaston White Cluster*, and *Chasselas Musque*. To these I added two *Black Hamburgs*, and also roots of the *Sweetwater* and *New Burgundy*, which had been growing in open air for three or four years, doing no good. The vines were watered freely morning and evening when the weather was warm, and by the last of August all of them had reached the top of the house. Early in November the vines were taken down from the wires, washed with soot and sulphur in milk, as a security against mice, headed down to nine feet in length, and then disbudded; that is, I took out with a knife two buds between those left, leaving them on alternate sides of the vine, and removing two thirds of the entire buds that had formed above the plate, and all of them below it. This gives great vigor to the next year's growth, and saves much trouble in pruning. The vines were then wrapped in straw, and lightly covered with earth. The end windows of the grapery were kept open, to keep things cool, except in extreme weather. On the 14th of March, the vines were taken up and slung with pendant heads loosely to the wires, until the buds should burst. This was imprudently early. After a few warm days, a long succession of cold weather followed. On the night of 29th of March, the thermometer stood at six degrees above zero in the open air, and at only sixteen in the grapery. No protection was given to the vines, except to lay them on the earth; and they did not appear to be injured. While the weather was cold, the house was kept very dry, and the vines watered freely with a small engine, morning and evening, with the returning heat, except when in bloom. Four or five times during the summer, at weekly intervals, the vines were treated to a weak solution of sulphate of ammonia; and on the 15th of June, bunches and berries were severely thinned out. Two pounds of sulphur were also at times sprinkled evenly over the floor, from a dredging box. On the 11th of August we commenced cutting Grapes, and they lasted until the 26th of October. A summer inventory of the grapery gave the following results:

No. 1. *Muscat of Alexandria*—no fruit. Headed clear back in March, and a strong cane over an inch in diameter taken up for next year.

No. 2. *Hamburg*—not fruited.

No. 3. *Hamburg*—produced 6 bunches.

No. 4. *Chasselas Musque*—produced 11 bunches.

No. 5. *Royal Muscadine*—“ 17 “

No. 6. *Pitmaston White Cluster*, “ 23 “

No. 7. *New Burgundy*, 2 canes from one root, produced 37 bunches.

No. 8. *White Sweetwater*, “ “ “ 56 “

The vines for a temporary purpose were fruited the heaviest, and will be displaced for the permanent ones. All the fruit of this year was large and fair, and ripened fully, except two bunches of *Chasselas Musque*, which were affected by shanking; that is, the stems dried, and the Grapes shriveled while ripening.

As this is only the second season with my vines, I presume it will be said that I have only been anticipating future crops—raising three years' Grapes in one, and thereby using up the vines. If I find it so, I will report hereafter; at present I will only say that I have taken up better canes, and have riper wood for next year, than I had for this.

Though an unobservant follower, I pin my faith a good deal upon Mr. CHORLTON as a Grape-grower; not because his rules are more in keeping with that impatience of results so characteristic of Americans, but because I believe with the instincts of true genius he endeavors to overcome difficulties. It may be true that vines require a certain maturity of wood and root before they should be permitted to bear. What that maturity is, observation must determine. It requires several years for a vine to produce from seed; that is one thing; and nature indicates its law, by refusing to produce earlier. But when a vine is artificially grown from cuttings, the analogy may not be complete. It require little maturity of wood; for the fruit is always produced on a branch of the same year. Does it require four years' induration; or is capacity of root and stem, whether of one or many years' growth, the question? Experience alone must decide this. Some vines, from appearance, are less fit at three years, than others are at one. The objects in Grape-culture may also have something to do with it. If a cultivator wants to take premiums at a State fair, under sharp competition, he may take six years to mature four bunches of *Black Hamburgs* that shall weigh three pounds a piece. If, on the contrary, he wants Grapes for family use, less showy but equally good, he can in the mean time raise one hundred bunches that shall weigh a pound or less a piece. I have raised this many this year from a single vine eight years planted.

It is true that nearly all the authors condemn early production; yet Grape-culture, in cold vineries, is in this country in its infancy; and when a novice looks in the books, he will find sufficient diversity of opinion to afford him full scope for enterprise and experiment. Take, for instance, the following suggestions by authors of repute: "The *Muscat of Alexandria* requires a *high, moist temperature*, when in bloom, and then the complaints against it as a bad setter will be remedied."—*McIntosh*, page 439. "For the *Muscat of Alexandria*, a *dry atmosphere*, when at rest and when in bloom, is *indispensably necessary*."—*Chorlton*, page 43. "Open the grapery soon, and close early, ought to be a maxim well riveted on the mind."—*Idem*, page 58. "Open late."—*H. G., Boston, Horticulturist* 1852, page 323. "Give little air until fruit is ripening."—*Idem*, page 323. "Give *plenty* of air."—*Downing*.

To close an article, already longer than I intended it to be, and written chiefly for novices like myself in Grape-culture, I would say, that my borders settled some six inches after planting the vines, which I filled up with a light compost and manure. The vines, rejecting the theory laid down for them in "terra-culture," have occupied and filled the added soil with new roots, and I do not yet perceive the evil of it stated in the books. I mention it that others may make their borders in time to settle before planting.

## FLOWERING PLANTS IN GREEN-HOUSES THROUGH THE WINTER.

BY WILLIAM CHORLTON, NEW BRIGHTON, STATEN ISLAND.

By the complaint of your correspondent "QUERIST," in your October number, he appears to be sorely disappointed with regard to the produce of his new green-house, and after expending \$800, that he has not been able to furnish his desires, of "having cut flowers regularly for the center table." Now, we may well sympathize with those enthusiastic amateurs who often deprive themselves of other luxuries to begin the cultivation of flowers, more particularly when we see them going to the expense of erecting glass houses for the reception of their favorites; and, under the circumstances, it becomes a duty, owing to our own profession, to give a helping hand, that the disappointed, in their first efforts, may not despair of success, or reluctantly turn their attention away from this pleasing, ennobling, and instructive pursuit.

In the present case, it appears to me that the above sum ought to have accomplished this little affair, if rightly appropriated, with proper culture added; and having said thus much, it remains for me to show how it may be done. He speaks of not being able to afford two houses. Why not have a division-window inside? Two small houses in this style might have been plainly and substantially built for less than the cost he mentions; and one furnace, or hot-water boiler, if rightly constructed, would have answered for both. I have at present under charge, two houses of this character, which are seventy-five feet long by twenty feet wide; both are worked to satisfaction with one of HITCHINS' boilers, having a shut-off valve. In one division is a general collection of green-house plants, and in which, by artificial heat, is kept a temperature of 40° to 45° at night; and in the other, from 55° to 60°, which is sufficient for most things, such as your correspondent will require,—in fact, enough for almost any tender exotics that are cultivated. His want of success has most likely occurred—first, from having only one temperature; and, second, by keeping too dry an atmosphere, with too much heat for some of his plants,—the dropping of the *Camellia* buds, for instance. Now, if he will put a glass division inside, and adapt his heating apparatus so as to work one or both divisions, as may be desired, he will have no occasion to despond as regards the convenience. Of course, proper culture and management is an essential requisite, without which, all the money he may expend will not make up for the deficiency in this respect.

There is also another consideration; all houses for growing winter-flowers, ought to face full south, or very few degrees east, or west, of that point, and be fully exposed to the sun's rays. The plants also, should be kept as near the glass as possible. The very best culture will be rendered neutral, so far as flowers are concerned, where these requisites are not attended to.

Another thing, is a judicious selection of those kinds of plants which bloom through the winter months, choosing, as far as may be, free, and long-continuing bloomers. Variety of color ought likewise to come in for a share of attention. Add to these



items, cleanliness, careful watering, open porous soil, and well-drained pots, and we have the sum total that will give satisfaction.

To succeed with winter-flowers, it is most essential that all plants be well established in the pot some time before wanted for use. Roses, to bloom from November, ought to be kept in the pots all summer, and placed in larger ones, if requisite, without removing the ball of earth, in September; or they may be removed from the open ground not later than October, if a stock has not been previously prepared for the purpose. Hyacinths, Tulips, and the like, should be potted at the same time, or even earlier, if they can be procured, and be kept in a cool place, out of doors, covered with rotted leaves, sand, or other loose material of a similar nature, until frost sets in. Mignonette, Sweet Alyssum, Nemophyllas, Schizanthus, and other like annuals, if sown in pots in September, and kept in a cool green-house near the glass, will furnish a great addition. Oranges, Gardenias, *Burchellia capensis*, *Deutzia gracilis*, *Spiræa Reevesii*, and *S. prunifolia plenus*, Persian Lilacs, Rhododendrons, and our much neglected Kalmias, may be kept in a low temperature till late in December, and then introduced into the warmer apartment, when they will soon expand their flowers. Azaleas with plump flower-buds, will be in bloom by New Year, if placed in the warm-house in October. Pinks, if potted in September, and kept in a cold frame, freely exposed to the air and light, will succeed, if placed in the warmer apartment, near the glass. A few pots may be introduced at intervals of a week, from the middle of December, and will produce flowers from the middle of February. This rich-scented and lovely flower is too seldom seen in the forcing-house, yet nothing is more easy to manage. If cuttings of Heliotrope are rooted in August, they will make strong plants, and will bloom all the season, if freely exposed to the sun, in a heat of 55°. Wall-flowers, Ten-week, or Intermediate Stocks, do best in an airy, cool situation; a few may be put in the cooler house to bloom through winter, and others kept in a cold frame for spring flowers. Neapolitan, Tree, and Double White Violets, Primroses, Polyanthus, Auriculas, Forget-me-nots, Daisies, Pansies, &c., should also be grown in frames.

If Camellias are subjected to too much heat, or a parched atmosphere, the buds are very liable to drop, and the general health of the plants is sure to be impaired; 40° to 45° at night is quite sufficient. A judicious supply of fresh air, avoiding cold drafts, is also indispensable. The following are twelve of the best, and cheap kinds: *Double White*, white. *Abby Wilder*, white, striped with pinks. *Wilderii*, rose. *Bealii*, red. *Imbricata*, crimson, sometimes marbled with white. *Houri Lefevre*, rosy red. *Binnegii*, crimson. *Landrethii*, pink. *Incarната*, or *Lady Hume's Blush*, light flesh color. *Saco de Novo*, light rosy pink. *Sarah Frost*, light crimson. *Dunlap's Imbricata*, marbled rose and white.

To bloom Roses well through winter, choice should be made of the free and continual bloomers, as Tea, Bourbon, and China; and even in these classes there is much difference for this purpose. The plants ought likewise to be kept near the glass, in a heat by night of 55°, allowing it to rise to 70 or 75° by sunlight. The following selection, under favorable circumstances, will continue to furnish an abundance of

flowers from November to May: *Common China*, pink. *Cramoisi Supérieur*, dark crimson. *Hermosa*, pink. *Mrs. Bosanquet*, blush. *White China*, white. *Le Pactole*, light yellow. *Louis Philippe*, crimson. *La Sylphide*, tawny white. *Souvenir de la Malmaison*, fleshy pink. *Lamarque*, white. *Bougere*, salmon. It is best not to attempt too much variety in this case; and the above list, though limited as to quantity, contains a variety of colors. They are also, with the exception of the *Common* and *White China*, all good-formed flowers, and have the extra advantage of being handsome in the bud. To enumerate all that may be done, and exactly how to do it, would occupy a volume, so we must be content to give a rough draft for the present, with the hope that these few remarks may be of use to your correspondent and others who may be placed in the same predicament.

The following list, in addition to what is mentioned above, contains some of the best adapted, most suitable, and handsome plants, which bloom through the winter and spring months:

* <i>Abutilon striatum</i> ,	<i>Justicia elongata</i> ,	<i>Ageratum Mexicanum</i> ,
* " <i>venosum</i> ,	* " <i>bicolor</i> ,	* <i>Allamanda neriifolia</i> ,
* <i>Euphorbia splendens</i> ,	* <i>Aphelandra cristata</i> ,	* <i>Eranthemum pulchellum</i> ,
* " <i>jacquiniiflora</i> ,	* <i>Cyrtocercus reflexa</i> ,	* <i>Franseria latifolia</i> ,
* <i>Poinsettia pulcherrima</i> ,	* <i>Ruellia formosa</i> ,	* " <i>Hoppeana</i> ,
<i>Jasminum grandiflorum</i> ,	* <i>Bleтия Tankervillea</i> ,	<i>Gardenia radicans</i> ,
" <i>multiflorum</i> ,	<i>Olea fragrans</i> ,	" <i>Fortuneæ</i> ,
" <i>revolutum</i> ,	<i>Polygala cordifolia</i> ,	" <i>florida</i> ,
* " <i>Sambac</i> ,	<i>Kennedia monophylla</i> ,	<i>Cestrum aurantiacum</i> ,
" <i>odoratum</i> ,	" <i>Marryattæ</i> ,	<i>Buddleia Madagascariensis</i> ,
* <i>Bouvardia leiantha</i> ,	* <i>Inga pulcherrima</i> ,	* <i>Habrothamnus elegans</i> ,
* <i>Pentas carnea</i> ,	<i>Illicium floridanum</i> ,	* <i>Bignonia venusta</i> ,
* <i>Manettia bicolor</i> ,	<i>Erica actæa</i> ,	* <i>Epiphyllum truncatum</i> ,
<i>Pelargonium</i> , Lady Compton,	" <i>mediterranea</i> ,	* " <i>crenatum</i> ,
* <i>Begonia fuchsoides</i> ,	* <i>Plumbago rosea</i> ,	* " <i>Ackermanii</i> ,
* " <i>insignis</i> ,	* " <i>capensis</i> ,	* " <i>Fiedlerii</i> ,
* " <i>hydrocotylifolia</i> ,	<i>Cuphea platycentra</i> ,	* <i>Cereus speciosissimus</i> ,
* " <i>manicata</i> ,	* <i>Salvia splendens</i> ,	<i>Fabiana imbricata</i> ,
* " <i>coccinea</i> ,	" <i>leucanthera</i> ,	<i>Metrosideros floribundus</i> ,
* " <i>semperflorens</i> ,	<i>Pelargonium</i> , Tom Thumb,	* <i>Nematanthes longipes</i> ,
<i>Daphne odora</i> ,	and all the other scarlets,	* <i>Columnnea Scheidiana</i> ,
* <i>Justicia coccinea</i> ,	<i>Stevia serrata</i> ,	<i>Weigela rosea</i> ,
* " <i>speciosa</i> ,	<i>Eupatorium elegans</i> ,	<i>Spiræa prunifolia</i> ,

The above list might be considerably enlarged, but there are enough enumerated to furnish a fine display, and enable your correspondent not only to come up with "contemporaneous bouquets," but also give him a return profit, in the way of gratification.

## THE SUMACH.

BY WM. R. PRINCE, FLUSHING, N. Y.

As a spirit seems now most appropriately awakening toward the development of the natural resources of our country, we may hope ere long to realize the noblest aspirations of the noblest man our country has produced, carried out to a conclusive result, by rendering our country independent of all foreign supplies of such commodities as may be readily produced from our own soil.

Sumach is one of the articles which we have hitherto imported largely, and I therefore send you some explanatory remarks on the subject. The *Sicilian Tanner's Sumach* is a rather tender shrub for any latitude north of New York. It would succeed in New Jersey, and to the south of it.

With regard to our native Sumach, we have four, and perhaps five, species that possess a sufficiency of tannin to render them valuable for domestic use and for commerce. It will be requisite to test them all, in order to select the preferable species for extensive culture.

The species found so common in neglected fields and along the road-sides, is the *Rhus glabrum*, producing crimson berries in large clusters; and it is this which has been already made use of, to some extent—more especially in Connecticut and other eastern States. Its usual height is about four and a half feet.

A taller growing species is also quite common, and is the *Rhus typhinum*. It usually attains the height of ten to twelve feet, or more, with small clusters of dingy red berries.

A third species is *Rhus copallinum*, which is quite common in dry woods and fields, more especially where the soil is sandy. This species has more resemblance to the Sicilian Sumach than any other American species, in its foliage, and its gray bark and growth. It attains a height of seven to eight feet, and produces dull reddish berries, in small clusters. I should incline to the belief that this is the preferable native species for tanning; and fortunately it is disseminated far to the south and west, though seldom found north of New York. The Indians of the Mississippi and Missouri make use of the leaves of this species as tobacco.

A fourth species is *Rhus aromaticum*, which is not found in this State, or to the north or east of it. Its most northern limit is Pennsylvania, thence extending to Carolina and to Kentucky. This is a shrub of about four feet in height, with trifoliate leaves, which distinguish it from all the other species. It grows naturally in moist localities. The leaves, when rubbed, emit a very strong odor.

The four species I have described, all possess tannin to a greater or less extent.

A fifth species, in regard to which I have doubts, is the *Rhus vernix*, or Poison Sumach tree. This is found usually in low grounds, and attains a height of eight to ten feet. The leaves are pinnate, and resemble those of the Ash so much that it is often called Poison Ash. Its berries are white. Every part of this small tree is poi-



sonous, not only in the growing state, but, as I am assured by those who have suffered from it, even when vegetation has ceased and no sap is flowing.

Having now reviewed all the species which may be applied to the object desired, I will refer to a Chinese species, *Rhus succedunum*, from which the red lac is made, and which might be introduced and cultivated here. It is singular that so many useful and so many poisonous shrubs should be comprised in one genus.

In addition to the poisonous species already described, we have in plenty around us, *Rhus toxicodendron*, or poison ivy—a vine which runs over so many fences, and climbs so many trees; and in Pennsylvania and Virginia, *Rhus viridiflorum*, also very poisonous; and there is also *Rhus pumilum*—a dwarf shrub, found most plentifully in Vermont and Lower Canada, and also said to grown in Upper Carolina, which is deemed the most poisonous of all.

In California they have the Yedra or *Rhus viride*, which abounds in the mining districts, growing under the Oak trees, and is the only plant there that looks green and flourishing during the torrid heat of summer. Most woefully have the miners suffered from this poisonous plant.

In the Island of Java there is a poisonous species, *Rhus Javanicum*, so celebrated for its deleterious properties that it has been sometimes confused with the Bohon Upas tree of fabulous notoriety. There is another species found at Macao, and one in Barbary, and above a dozen species are natives of the region about the Cape of Good Hope; but of these the peculiar properties are unknown.

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## STUDY OF BOTANY.

BY S. B. BUCKLEY.

Why is not botany studied more? There is scarcely a school or college in the United States in which botany is taught, and very few in which thorough instruction in it is given. By thorough teaching, we mean where the instructor has a good knowledge of all the plants and trees growing in the vicinity of the school,—not only knowing their names, but also their classes, orders, and properties. Under such a teacher, if the students form herbariums for themselves, they will scarcely fail to gain knowledge which will be both useful and practical. Useful, because it will add much to their happiness whenever they go into the garden, fields, or woods; and practical, because they can then deal understandingly with the vegetation with which this beautiful earth is clothed, and without which it would be a barren, uninhabited waste. In some of our academies and schools, a few young ladies, and perhaps gentleman, recite a few lessons and analyze a few plants under a teacher who does not know and can not tell the names of one half of the plants growing within five miles of the school. Indeed, we believe there is not one of the nine colleges in this State in which botany forms a prominent study; and in only three of them is it named in their course of study: nor do we think any of said colleges has a good botanist as professor. Yale college

has no professor of botany, and we know but one college in the United States which has a separate professor for that study—the University of Cambridge, near Boston, which has a botanic garden under the supervision of Prof. GRAY, who is undoubtedly the best botanist in this country. In the above statement we by no means include the medical colleges, which unquestionably number several distinguished botanists among their professors, but with them little or no knowledge of botany is required for a degree. One great reason that botany is so little studied, is the want of competent teachers, and because its knowledge is not required to get a degree—the great aim of a large portion of students. Suppose the time required for Greek were given to botany, and other branches of natural science, which would be the most useful, especially to any who ever visit the country or garden? With a knowledge of botany, the world will appear brighter and more beautiful. We would by no means banish the study of Greek from our colleges. We have devoted many hours to its study, in order to obtain a degree—not worth one cent. We can not now read a Greek work without the aid of a dictionary, nor do we think that one out of every ten graduates in the country can; still, it is of great use in affording a better knowledge of the English language, especially of scientific terms. But we think a knowledge of botany to be worth more than all the dead languages. Then why should so much time be given to their study, to the neglect of the things by which we are surrounded, and among which we move and have our being. There are realities worth knowing; and the better we are acquainted with them, the greater will be our fund from which to derive happiness.

[The natural sciences, botany included, have, up to this time, been surprisingly neglected in the greater number of our educational institutions, and it is just the same in Europe; the study of botany at schools is a mere sham. One student out of ten thousand acquires a particular taste for the study—pursues it with the aid of books, and becomes a botanist. We would not wish to be understood as expecting that every school boy should be made a botanist, in the ordinary sense of that term; no such thing. To be a botanist requires a life-long study. One great reason why so few of those who study it at schools know really anything about it, is, that the teachers, as a general thing, pursue a wrong course. They begin, and go along with their pupils as if they were all aiming at being botanists. If, instead of this, they would merely endeavor to impart some knowledge of vegetable physiology, and of the natural distinguishing characteristics of the more important families of trees and plants, they would very soon impress upon the mind of the student the value of some botanical knowledge, and he would feel a greater inducement to follow it up and apply it. We might say much on this subject, if we could spare the time and space; but the time is evidently not distant when the education of the youth of the *country* will be conducted on a very different plan from that which prevails at present.—Ed.]

## WIND-ENGINES FOR RAISING WATER.

WE regard nothing, connected with the cultivation of gardens, with more interest than a cheap, simple, and efficient means of raising water. It is plain enough that, with a scanty and uncertain supply of water, obtained by some tedious and laborious process, such as *hand-pumping*, our long and severe drouths greatly reduce the profits and diminish the pleasures of gardening. What a tale last summer told, over a large portion of this country;—not a drop of rain for two long months—in some places *three*—until the ground was baked, as in an oven, several feet deep, or at least beyond the reach of roots. A correspondent in Illinois writes, “my Strawberries, of which I had an acre in a flourishing state, did well as long as water lasted; but when we had to go a mile to water our stock, the Strawberries were left to themselves, and died out totally. In fact, old trees died, and in many places, grass lawns died out, and had to be returfed or seeded.” Let all who have gardens or farms, provide in some way for unfailing and abundant supplies of water.

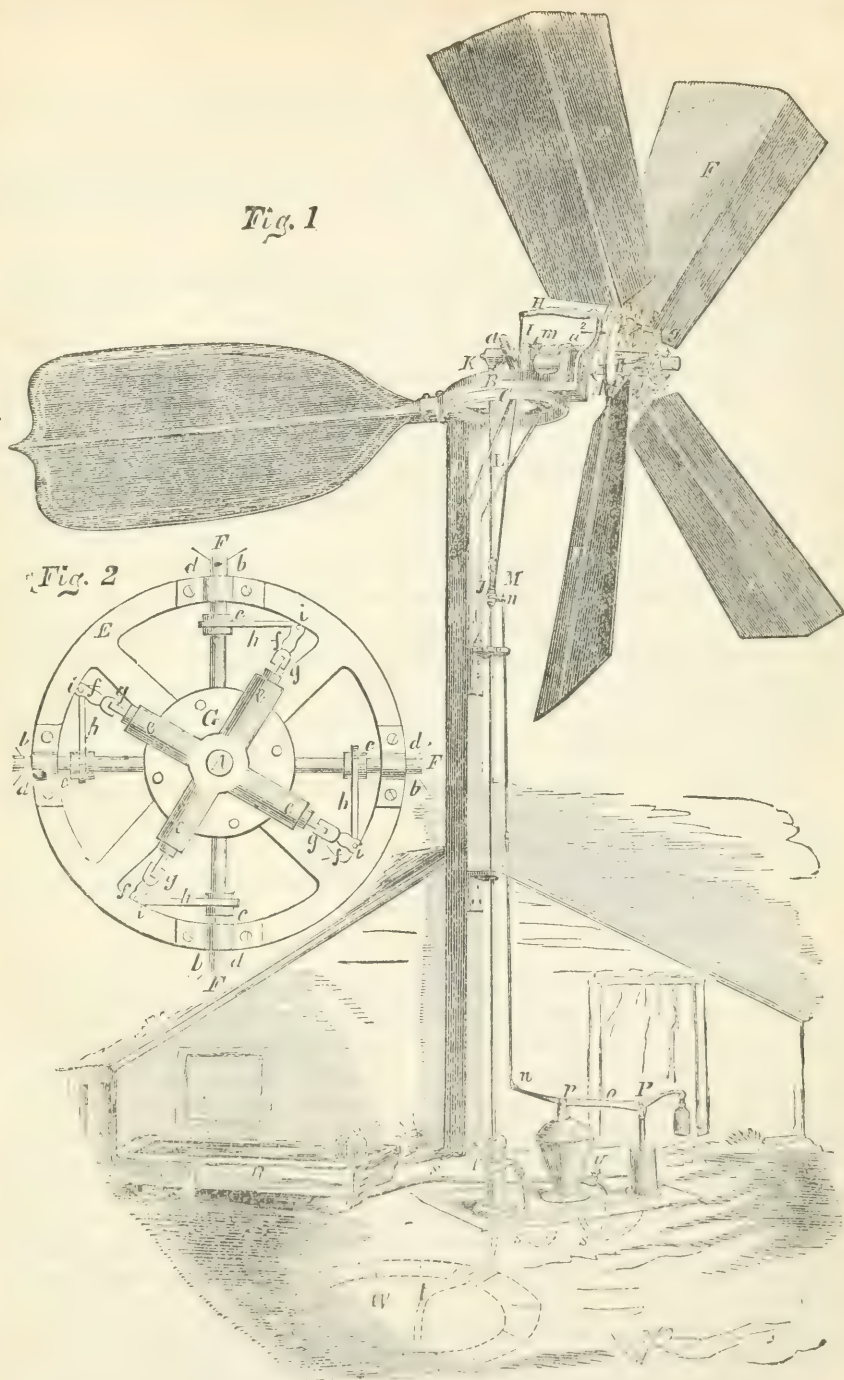
We had the pleasure, last month, of presenting some information on *Wind-Mills*, from the pen of Prof. KIRTLAND; now we give a cut and description of an engine which was exhibited at the New York State Fair, and as far as we know, elicited the approval and admiration of all who saw it in operation. We see that the agricultural press has noticed it very generally, and we are glad that this is so, for it shows that the raising of water by other than hand-power attracts attention. We have been informed that the cost of one of these engines is about \$85.00. The following is the description, by the manufacturers, Messrs. HALLIDAY, McCRAV, & Co., Ellington, Connecticut:

“It is made in the most thorough and durable manner, nearly all of Cast and Wrought Iron. The iron frame for the Fan or Wing is covered with thin painted boards or sail-cloth, according to the size of the machine. By a simple and ingenious device, as a gale of wind increases in severity the wings gradually turn around, changing the angle at which they are set for a common breeze, presenting less and less resistance to the wind, till finally, when the tempest is raging at its height hardly anything but the thin edges of the wings are presented to its power. As the fury of the gale abates, the fans gradually turn back, and when the storm is past they resume their original position. The speed of the wind wheel is never increased by a powerful storm of wind, for it is as fully under the control of the regulator as the Water-wheel or Steam Engine. The boxes in which the main shaft and crank pin turn are lined with Babbit Metal, and kept oiled by oil-cups, tubes and lamp-wick drawing the oil on as needed. If this Mill is well put up by competent workmen, it requires no care or attention for weeks together. Oiling twice a month is sufficient, if the right kind of oil is used.”

We have no doubt, now that the subject has engaged the attention of Horticulturists and Mechanics, we shall ere long have a machine, and perhaps several, for raising water, that will be simple, cheap and efficient. We are promised drawings of a new Wind Mill for this purpose, in season for our next.



*Fig. 1*



HALLADAY'S PATENT SELF REGULATING WIND-ENGINE.

## AMERICAN POMOLOGICAL SOCIETY—THIRD SESSION.

THESE Proceedings will soon be ready for distribution, and, judging from some early pages with which we have been favored, the publication will be a great improvement on all the previous ones, not only in the value of the material, but in its tasteful and excellent mechanical execution.

The State reports include Maine, Vermont, Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Maryland, Virginia, Mississippi, Ohio, Missouri, and the District of Columbia. In all these reports we shall find much valuable information, which we must pick out as we get time. Mississippi we are glad to find among the reports, as we know so little of the fruit-growing capacities of that great southern region—say from North Carolina on the east, to the Mississippi,—embracing the Carolinas, Georgia, Alabama, Florida, and Mississippi. We therefore take the Mississippi report as the most novel and interesting document of the kind in the proceedings, and lay it entire before our readers.

Strawberries, it is said, continue in bearing through May and June. What surprises us, is, that they do not ripen sooner, as Peaches are there ripe in June, and Apricots in May. Pears on Quince stock, six and seven years from bud, twelve to twenty feet high, and six to eight inches in diameter! *Julienne* Pears, eight ounces! *Bartletts*, sixteen ounces! *Beurre Diel*, twenty-four ounces! *White Doyenne*, large and fine without cracking. *Chauumontel* weighing a pound, sugary and melting! We have always said this Pear would do well in a warmer soil and climate than ours, and here is the proof. Mississippi beats the island of Jersey in the production of this famous fruit.

This report is encouraging to the south, and is calculated to open all our eyes in regard to the fruit-growing resources of the United States in the aggregate.

## REPORT FROM MISSISSIPPI.

A report upon the subject of fruit growing in the State of Mississippi, should properly be prefaced with a few remarks upon the soil and climate.

SOIL.—My locality is six miles south of the city of Natchez, between the thirty-first and thirty-second degrees of north latitude. The surface soil is a rich, black, vegetable mold, about eighteen inches in depth, resting upon a strata of hard clay, underlaying which is a yellow loam, filled with fresh water shells. This great loamy formation, elevated about two hundred and fifty feet above the level of the sea, extends along the right bank (ascending) of the Mississippi River, from the thirty-first degree of north latitude, as far up as Vicksburg, (thirty-two and one-half degrees north latitude,) and runs horizontally eastward from the river, a distance of twelve to fifteen miles, at which point a marine and fresh water deposit, with recent sea shells, crops out followed by the eocene formation of geologists.

Upon the first belt of soil next the river, (the richest upland in our State,) porous in its texture, abounding in phosphate, and the underlaying strata of loam in the carbonate of lime, the native forest trees grow luxuriantly, and attain a majestic size. The Magnolia,

the Tulip tree, the Sassafras, the Black Walnut, and several species of the Oak, are found eighty to one hundred feet in height, and having a diameter of from three to five feet near their bases.\* In so rich a soil, the growth of all fruit trees is much more rapid and vigorous than upon the Atlantic slope, and consequently the trees are a longer time in coming into a bearing state.

CLIMATE.—Our winters are generally mild and open—snow seldom falls, or if so, melts away under sunshine in a few hours. We never experience so great a degree of cold as to kill fruit trees. The thermometer has been known to fall as low as fourteen degrees above zero, but this is very unusual. Our winters are cold enough to give deciduous fruit trees a sufficient period of rest to recruit for another summer's fruit bearing; and this, followed by a spring and summer of so high a temperature as to mature the latest kinds of fruit early in the fall, is all that is wanted, as regards climate, to bring fruits to perfection. The temperature during the months of May, June, July, August, and September, is almost torrid. The thermometer rarely falling under eighty degrees, and often rising to ninety and ninety-five degrees. Spring frosts occur, but rarely destroy the fruit crop. Long drouths are prevalent during our summer and fall months.

Before noticing the varieties of fruits which follow, I must premise that aspect is of high importance with us, and that the best exposure for an orchard is a northern one. I would also state that my ground was well prepared before I planted out the trees—that the specific mineral manures, especially for the Apple and the Pear, were incorporated in a well decomposed compost, and this spread over the surface of the orchard two inches deep. The ground was then trench-plowed, followed by a sub-soil plow; and after planting, the trees kept well mulched during the summer months, and the soil every year cultivated in root crops.

#### STRAWBERRIES.

This fruit is indigenous to our State. I cultivate the wild variety for its early maturity; ripening first week in April. I also cultivate the *Black Prince*, *Crescent City Seedling*, *Hovey's Seedling*, and *Large Early Scarlet*. All these varieties bear well, and are deliciously flavored. They continue in bearing during two months, May and June.

#### RASPBERRIES.

I cultivate the *Red Antwerp*, *Yellow Magnum Bonum*, and *Festolff*. Our climate and soil is favorable to the growth and maturity of this fruit. They continue with me in bearing two months, May and June. The plants require heavy mulching during our hot months.

#### CHERRIES.

It is rare to find this fruit in our southern States; and the prevalent opinion is, the Cherry will not fruit in this climate. As this fruit (it is well known) was raised in perfection by the ancient Romans in Italy, and as several varieties are at the present day successfully cultivated in the south of Spain and Italy, I see no valid reason why it should not succeed with us. I cultivate the following varieties:

HEART CHERRIES.—*Bauman's May*, *Downer's Late*, *Early Purple Guigne*, *Grafton*, *Sparhawk's Honey*, *Black Tartarian*.

DUKES.—*Belle de Choisy*, *Late Duke*, *May Duke*.

BIGARREAU.—*Monstreuse de Metz*, *Bigarreau Napoleon*, *White Bigarreau*.

MORELLOS.—*Butner's Morello*, *Rumsey's Late*.

\* See Additional Notes.



My bearing trees are upon the *Mahaleb* stock, and six years old from the bud. They bore abundant crops the spring of 1853; the fruit perfect in size and luscious in taste. The *Early Purple Guigne*, was especially noticed for its large size and delicious flavor. This variety excelled all the others in quality; the *Late Duke* and *May Duke* ranking next. This year the Cherry crop was cut short by a frost when trees were in bloom. I had less fruit, and that of inferior size to the preceding year.

I would wish a longer experience before speaking confidently of success with this fruit.

#### PEACHES AND NECTARINES.

No region of country upon the globe, can exceed ours in the perfection to which these delicious fruits attain, our burning sun developing the saccharine qualities of the peach to the highest degree. Even the yellow fleshed varieties are with us, sweet and sugary, with only so much acid as to be grateful to the taste. I cultivate about one hundred varieties of the Peach and six of the Nectarine. Although the northern varieties are sometimes cut short by frosts, from their habit of late blooming, still the Peach may be considered a sure crop in this region. In a period of ten years past, I have never failed in securing a crop. Our State exports largely of this fruit to the New Orleans market. All northern varieties ripen with me in June and July.

#### APRICOTS.

I cultivate the *Moorpark*, the *Large Early*, the *Peach Apricot*, and the *Breda*. Since planting the trees upon the north side of buildings, I have not failed of securing fair crops of fruit. Ripens here latter end of May. The ground under my trees is well paved, and the curculio, so far, has never attacked the fruit.

#### PEARS.

This fruit has only been recently cultivated to any extent in our State. I learn there are trees yet growing, (supposed to have been planted by the early French and Spanish colonists,) upon the Bluffs, south of Natchez—and known as the *Cliff's Pear*—an indifferent table fruit, and only suitable for cooking; although in times past it was so rare a sight to see a Pear tree in the fruit orchards of this region, now that southern nurseries have been successfully established, thousands and tens of thousands of Pear trees are being annually planted, and our State will, without doubt, in ten or fifteen years from this date, export largely of this fruit to the West Indies and the northern cities. The intense heat of our summers, maturing the Pear fully two months earlier than ten degrees north of us, it will enable our fruit growers to supply northern markets with finest varieties during months of July and August. I cultivate over one hundred varieties of the Pear. The greater number dwarfed upon the quince; on this stock, trees six and seven years from the bud, have grown from twelve to twenty feet in height, and have a diameter in trunk of six to eight inches. Native or acclimated trees are greatly to be preferred over imported ones.

SUMMER VARIETIES.—*Madeleine*, or *Citron de Carmes*, on quince—Trees six years old from bud; fifteen feet high; bore heavy crops for the first time this year; fruit double the size figured by DOWNING; flavor juicy and sprightly; quality second rate; ripe fifteenth of May, and continues in eating one week.

*Doyenne d'Ete*—The few specimens I had of this fruit from grafts in standard, promise well; higher flavored than *Madeleine*, and ripens same date; grows vigorously on quince, trees three years from bud have not fruited.

*Bourre Giffard*—The few specimens I had from grafts in standard, give promise of the

highest excellence. A vigorous and rapid grower on quince; trees four years from bud have not yet fruited; ripe in June.

*Bloodgood*, on standard—One of the best early Pears; flesh melting, and flavor aromatic; quality best; ripens early in June; on quince is a slow grower.

*Belle de Bruxelles*, on quince—Fruit much smaller in size than figured by Mr. BARRY in the Horticulturist; flavor only tolerable; quality simply good; ripens early in June.

*Rostiezer*, on quince—Fruit small, but abundant bearer on trees five years from bud; flesh melting, buttery, and of highest flavor; quality best; ripens early in June.

*Tyson*, from grafts on standard—Fruit medium size; very sugary and juicy, and having a rich aromatic perfume; slow grower on quince; ripens with me the middle of June; quality best.

*Passans du Portugal*, from grafts on standard—Fruit small and very round; but having a delicate and agreeable flavor; quality good; ripens here last of June.

*Summer Francreal*, on quince stock—Fruit large; flesh melting and sugary; quality best; ripe last of June.

*Julienne*—This Pear I think the most desirable for general cultivation in this State of all the summer varieties; has fruited with me both on standard and quince. On quince stock, my trees, six and seven years from bud, have a trunk eight inches in diameter and fifteen feet high; vigorous and healthy wood. Trees this year loaded with fruit; had to thin out, leaving about three hundred specimens on each tree; will ripen in fruit cellar, if taken from the tree, from middle of June to end of July, and continue in eating to 20th August; fruit large size; most of my specimens weighed half a pound, and not unlike *Bartlett* in shape; ripen in fruit cellar beautifully, turning from green to a rich lemon yellow; surface shining, waxy, and looking as if varnished; flesh melting, buttery, and rich, and having a most delicate perfume; quality best. Fearing I might be over-estimating this variety, I invited to my house a number of gentlemen who were familiar with the best fruits north and south. I had in eating at the same time, *White Doyenne*, *Bartlett*, *Beurre Bose*, *Beurre Diel*, *Golden Beurre of Bilboa*, *Duchesse d'Angouleme*, and some other varieties, but the *Julienne* bore off the palm, without a dissenting voice, for beauty in color, for its melting qualities, and for delicacy of flavor.

*Bartlett*, on quince, and standard—Fruit large, many specimens weighing fully one pound; ripens admirably in fruit cellar, long before ripe on trees; is in eating during all July and August; quality best. This Pear and the *Julienne* I consider best varieties for market culture in our State.

AUTUMN VARIETIES. *Beurre Diel*, on quince and standard—My trees on Quince stock, seven years from bud, large and vigorous growers; bears heavy crops; trees this year thinned out, leaving one hundred and fifty specimens on each tree; fruit attains to a much larger size than at the north. Some of my specimens weighed one and one-half pounds, and few less than one pound; ripens finely in cellar; turning from green to rich golden yellow; flesh rich, sugary, buttery and melting; quality best; ripe all July and August.

*Golden Beurre of Bilboa*, on quince and standard—Trees on Quince, seven years from bud, have grown vigorously and bear heavily; fruit large, buttery and melting in flesh, and having rich vinous flavor; quality best; ripens in July and August.

*Duchesse d'Angouleme*, on quince—This noble Pear, in our rich warm soil and burning climate, attains its highest perfection. Trees on quince vigorous and rapid growers, six years from bud, twenty feet and over in height; with me a prolific bearer; had this year to thin out fruit, leaving about one hundred specimens on each tree. Fruit very large,

few specimens under one pound in weight, and many one and one-half; ripens admirably in collar, and is in eating all July and August: flesh fluttry and very juicy, with a rich agreeable flavor; quality very good to best.

This variety is a desirable one for market culture in our State. I have taken specimens unripe from trees latter part of July, and carried them by steamer to New York, where they opened sound and ripe tenth of August.

*Bourre d'Amalis*, on quince and standard—Fruit very large, not unlike *Bourre Die* in size and shape; flesh rather coarse, but buttery and melting; quality very good; ripens in July and August.

*Bourre Rose*, double worked on quince—Trees seven years from bud; sparse bearer, so far: fruit large in size; flesh melting and buttery, with rich perfumed flavor; quality best; ripe in August.

*Maria Louise*, on quince—Trees six years from bud, and bushy in habit of growth: so far sparse bearer; fruit large; flesh very saccharine, and having high vinous flavor; quality very good; ripens in August.

*Bourre Gobault*, on quince, four years from bud—Bore this year about one dozen specimens each; fruit medium sized; flesh melting and deliciously flavored with agreeable perfume. I consider it one of the best of the recent Flemish Pears: the specimens all sound, handsome, very round in shape and green colored when ripe; ripen here last week in July. Quality best.

*Leach's Kingessing*, on standard—Fruit large in size; deep sea green color when ripe; flesh very buttery and melting, and delicate flavor. Quality best, and ripens here the last of July.

*Doyenne White*, on quince and standard—Trees healthy and vigorous growers: on quince, six years from bud, has borne well; fruit medium sized—not so large as I have seen at the north: specimens fair and beautiful, without any defect; with me has never cracked; flesh buttery and melting, but not so highly flavored as the *Julienne*; quality very good; ripens all August.

*Doyenne Gray*—The few specimens I have had this year from standard were smaller in size than same variety at the north. Fruit medium size; flesh melting and buttery, and delicious flavor; skin a lively cinnamon russet; quality very good to best; ripens middle of August.

*Die*, double worked on quince—So far a sparse bearer; the few specimens I had were large, rich, sugary and melting; quality very good, and ripens in August.

*Brandyne*, on standard—A vigorous growing tree; fruit large, finely formed and uniform size; flesh very melting, with a sweet and rich juice; quality best, and ripens middle of July.

*Bezi de la Motte*, on standard—Fruit large in size, but defective in flavor, and rots at the core; ripe last of August.

*Flemish Beauty*, on standard—Fruit large in size, and fair and beautiful in appearance; unless taken from the tree before ripe, rots at the core; otherwise a desirable variety with us; ripe in August.

*Vert Longue*, on standard—Fruit large in size, very long, pyriform in shape, and bluish-green at maturity; flesh very juicy, with sprightly flavor; quality very good; ripe last of July.

*Bourre d'Anjou*, on grafts in standard—Fruit large in size; flesh buttery, melting, and delicately perfumed; quality best; and ripens early in August.



*Louise Bonne de Jersey*, on standard—Fruit large; flesh juicy and melting, and highly flavored; quality very good to best; ripens in August.

*Seckel*, on quince and standard—Sustains here fully its high reputation.

*Fondante d'Automne*, or *Belle Lurative*, on quince and standard—Not so large in size as at the north, but is with us a delicious Pear, not exceeded by the *Seckel* for high aromatic flavor; quality best; ripens last of August.

*Vicomte de Spoelberg*, on standard—Fruit large size; color, when ripe, a rich lemon yellow; flesh melting and buttery, and sprightly flavor, with a delicate perfume; quality best; ripe in August.

*Autumn Bergamot*, on standard—A most prolific bearer, but fruit rots at the core, and not a desirable variety, so far, with me.

*St. André*—The few specimens I have had from grafts in standard, give promise of highest excellence.

WINTER VARIETIES.—*Winter Nelis*, on quince and standard—A prolific bearer; fruit large; flesh buttery and very melting, abounding in rich aromatic juice; quality best, and in eating with us in October and November.

*Chamoncel*, on standard—This capital old variety, in our rich, warm soil, is a highly desirable Pear; fruit very large, some specimens weighing one pound; flesh buttery, sugary, and melting, with slight perfume; ripe in October and November.

*Glout Moreau*, on standard—Heavy bearer; fruit large; flesh buttery, and exceedingly sugary; on the quince, my trees, ten years from bud, have not yet borne fruit; the trees large and growing yet vigorously; ripe in October.

*Knight's Monarch*, on quince—The few specimens I had, last November, of this Pear, gave promise of highest excellence.

*Beurre d'Arenberg*, on quince—So far, this variety has rotted badly with me; I have not yet tasted a ripe specimen.

*Passe Colmar*, on standard—Heavy bearer, and with me one of the most desirable of late varieties.

I have had a few specimens of some of the recently introduced Flemish Winter Pears, but desire a longer experience before noticing their good or bad qualities in this climate. I would remark, in closing the subject of Pears, that the early and summer ripening varieties are more successfully grown than the winter varieties. The liability of the Pear to rot here, as it approaches maturity, may have been one reason why this fruit has been so long neglected in this State. This defect I have, in a great measure, obviated by gathering the different varieties so soon as they have grown to full size, and before they soften on the tree, and ripening them in a cool cellar. My cellar is an inside one; dark, but well ventilated, and having double walls. The fruit should be suspended by the stem and not rest on shelves. Another difficulty: the larger and heaviest pears are apt to drop from the trees before maturity, and especially during a period of drouth. I have this year remedied this by placing barrels filled with soap-suds over the roots of the trees, and allowing the liquid to escape by drops through a small orifice near the lower end of the barrel. I have no doubt, too, that the soap-suds and a handful of guano being put into the barrel has added to the size of the fruit, and kept the tree in high health during the hot months.

#### APPLES.

This fruit has been generally planted in laying out orchards in this State for twenty or thirty years past. The early and summer varieties succeed well; the trees grow vigorously,

and the fruit without defect, and well flavored. The late or winter kinds, are apt to rot and fall from the tree before maturity. I cultivate about one hundred varieties, and have only time and space to notice a variety which I think surpasses all others in size and flavor. It is the

*White Spanish Bionette*.—My trees were planted twenty-five years ago, are yet healthy and vigorous, and bear every year heavy crops of this excellent fruit. This variety is the *Camotesar* of Spain, where it is said to have been cultivated from the highest antiquity. The early Spanish colonists introduced it to this region of our State. It has become thoroughly acclimated with us. Fruit large, some specimens monstrous in size; roundish oblong in shape; skin smooth, oily, yellowish green on shaded side to clear yellow; on some specimens a blush of brownish red next the sun; flesh yellowish, crisp, tender, with a sugary and highly aromatic juice; ripens in August and is in eating a month.

#### INSECTS INJURIOUS TO FRUITS AND FRUIT TREES.

In a country where there are few, if any, old orchards, insects injurious to the trees are not likely to abound. I have never seen the apple borer with us, and never had a tree sustain any injury from this insect or the canker worm. The Peach borer (*Elgeria ceticornis*) is abundant, but its depredations are easily checked. We have, however, an insect which is terribly destructive to our fruit; this is a small brown beetle, known as the *carpocapsus* or fruit eater. It is especially destructive to the Peach and Nectarine, boring into the fruit so soon as it approaches maturity, and thus causing it to rot. It also attacks the Pear and Apple, if these fruits are allowed to remain upon the tree until maturity. This insect has appeared in the last few years, and is becoming every year more numerous and destructive. I believe it to be the insect which causes the rot in the Cotton pod, of late so prevalent. I neither know nor have I heard of any successful plan for its extirpation. I have checked its ravages to some degree in my orchards by burning small torches at night, when many fly into the light and are thus destroyed. I find, too, it avoids the poultry yard, where my fruits have, in a great measure, escaped their attacks.

All which is respectfully submitted.

JOHN C. JENKINS.

Elgin, Near Natchez, August 31, 1854.

#### ADDITIONAL NOTES.

I cannot doubt that the cause of the gigantic vegetable growth upon the formation alluded to in the foregoing report, is due, in a great measure, to the lime in the loamy formation, the strata being filled with shells partly decomposed, and containing, also, in many places, the bones of extinct orders of the mammalia.

I had occasion, a few years ago, to dig off six to eight feet from a few acres of ground in front of my dwelling house, in order to make a level lawn. This exposed the loamy formation, (the strata of black mould and clay above not averaging over four feet in depth.) Upon this loam I planted the live oak, the magnolia, and other of our forest trees. They have grown rapidly, and have all a most healthy foliage. Deodar Cedars, set out in the spring of 1851, when small, say one foot high, are, to-day, by measurement just made, ten and eleven feet in height; and *Cryptomeria Japonicas*, planted at the same date, do not fall much, if any, below them.

I wished to have said something, in my report, upon the acclimation of the varieties of temperate latitudes to a region so far south as this; but I feared it might be misplaced and uncalled for. The Pear, introduced here more than one hundred years ago, by the French, is a late variety, vigorous in growth, and the specimens sound and healthy, hanging well

on the tree until approach of winter. The *White Spanish Reinette* Apple, also a long time since introduced, is marked by many excellent qualities. I am, therefore, induced to believe, that these fruits, being thoroughly acclimated or habituated to our climate, is one cause of their high health. I am now grafting standard Pears with two varieties, upon each tree, and from the seeds of these fruits hope to obtain new improved varieties, better adapted to the climate than exotic sorts.

In regard to the *Julienne* Pear, from the high rank as to quality I have given it in my report, you may be led to think I am deceived in the variety. I am confident I cannot be mistaken. The source from which I originally procured the variety, and my familiarity with the wood and fruit of the Pear, (recognising them as readily as I would the faces of my children,) convince me I have the *Julienne* of the books. Corroborative of my opinion as to the quality of *Julienne*, I enclose a letter I received 20th August last, from Hon. G. W. SARGENT, one of my neighbors, and a zealous pomologist, whose long residence at the north, (Boston and Philadelphia,) enabled him to judge of the merits of fruits here. J. G. J.

## ARTIST'S VILLA.

BY A. J. DAVIS, ARCHITECT, NEW YORK.

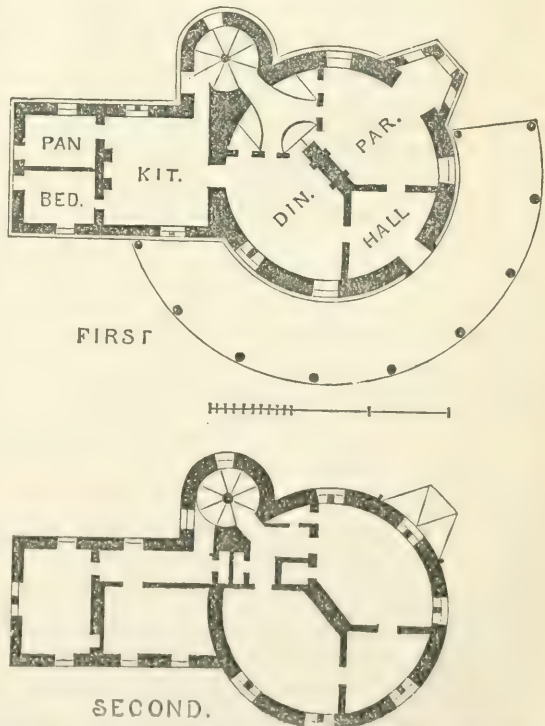
THIS is a study for an artist's own dwelling, and is thought to be adapted to a rocky hill site, "with thicket overgrown, grotesque and wild."

"The hairy side of a steep wilderness,"

and nature in full freedom, as artists love it.

The material is native trap rock, gathered from the surface around, and laid up with mortar, *backed with brick*, or the same stone *laid hollow*, paying no attention to smoothness, on the exterior, which will be overgrown with vines, and incorporated with the rock it stands upon.

This manner of building may be practiced in very many parts of the country, with economy, safety, and good effect. Hence it is offered to the patrons of the *Horticulturist*, landscape gardeners, and artists.—For elevation, see frontispiece.





The tower is intended to contain the stairs, and to lift the occupant above the trees around, the top commanding an interesting view from the ocean to the Highlands of the Hudson, embracing the cities of New York, Brooklyn, and Newark, with three broad and navigable rivers in the middle ground, and miles of wood in the immediate vicinity.

The plan is compact, and furnishes the usual accommodation of hall or entry, parlor, dining-room, and kitchen.

The second story contains five rooms, besides closets. Over this may be a library, or painting-room, picture-gallery, or museum.

## ARCHITECTURAL ORNAMENTS.

WHOEVER travels over our country will notice some strange freaks in the way of ornaments to buildings. People seem tired of the old tasteless style, and for want of knowledge and good taste, and not from want of disposition to do the right thing, pile on the ornaments, without the least taste or propriety.

The following article from *Repton's Landscape Gardening*, contains some valuable hints. It makes a fine addition to our chapter last month, from the same source; on "*Architecture—Styles and Changes*":

"OF ORNAMENTS, &c.—The English language does not admit of a distinction between those ornaments which comprehend utility, and those which are merely ornamental, or, rather, enrichments; thus, columns may be called architectural ornaments, but the sculptured foliage of the capitals are decorations and enrichments. In the progress of sculpture, we may trace it as an imitative art; from its origin, in the rude misshapen blocks of granite in Egypt, to its perfection, in the works of Greece, which are selected or combined forms of beauty, *ideal forms*, surpassing those of nature. We may, afterward, trace its decline, in the labored exactness of imitation, as in Chinese figures, where individual nature is so closely copied, that even *color* and *motion* are added to complete the resemblance.

"Much has been said, of late, concerning the study of nature in all works of art; but, if the most exact imitations of nature were the criterion of perfection, the man who paints a panorama, or even a scene at the theatres, would rank higher than CLAUDE or POUSSIN. In that early stage of painting in England, when the exhibitions were first opened, they were crowded with portraits in colored wax, artificial flowers and fruits, and boards painted to deceive and surprise by the exactness of their resemblance; but they never excited admiration like the *marble* of WILTON, the wood carved by GIBBON, or the animated canvas of REYNOLDS. MR. BURKE observes, that 'it is the duty of a true artist to put a generous deception on the spectators;' but in too close an imitation of nature, he commits an absolute fraud, and becomes ridiculous, by the attempt to perform impossibilities. If it is the mark of a low imagina-

tion to aim at the *vastness of nature*, an endeavor to copy the *minutiæ of nature* is not less a proof of inexperience and bad taste, since both are equally inimitable.

‘Si la Nature est grande dans les grandes choses,  
Elle est très grande dans les petites.’

[If Nature is great in great things, she is very great in little ones.]

The model furnishes hints, not portraits; yet such is the love of exact imitation in common minds, that copies are made from copies, without end.

“For this reason, houses are built to resemble castles, and abbeys, and Grecian or Roman temples, forgetting their uses, and overlooking the general forms of each, while their minutest detail of enrichment is copied and misapplied. In works of art we can only use the *forms* of nature, not the *exactness*. Thus, in furniture, if we introduce the head or the foot of an animal, it may be graceful; but if we cover it with hair, or feathers, it becomes ridiculous. And in the parts taken from the vegetable kingdom, to enrich the ornaments of architecture, imitation goes no further than the general forms, since we scarcely know the individual plant; although some writers have mentioned the Reed, the Acanthus, and the Lotus.



Imaginary sketch, to shew the forms of enrichment in Gothic architecture from the bud; Grecian from the leaf; and Indian from the flower.

“It is a curious circumstance, that the general forms of enrichments may be thus classed: The Gothic are derived from the *bud*, or *germ*; the Grecian from the *leaf*; and the Indian from the *flower*; a singular coincidence, which seems to mark that these three styles are, and ought to be, kept perfectly distinct.

## GARDEN ORNAMENTS.\*

BASKET-WORK, both rustic and artistical, enters into the list of *gardenesque* decorations; and, when filled with plants, either in pots to be removed when they go out of flower, or having them planted in them, has a good effect. They are valuable in another point of view—namely, to be set on lawns or in flower-gardens to which

\* From *M'Intosh's Book of the Garden*.

rabbits and hares have access. The flowers, being placed beyond their reach, may be cultivated where otherwise they could not.

Another class of decorations for this style is rustic baskets. Their forms and characters are endless, depending entirely on the ingenuity of the maker. They are usually formed of young Larch trees, having the bark left on, the form and substance of the work being first given by a strong box or other frame of the required shape, or a barrel cut transversely through the middle. The outer surfaces of these are covered, and formed into various designs, by splitting pieces of timber of uniform size and in the requisite lengths, and, after arranging them, which is most correctly done by drawing the pattern on the surface to be covered, nailing them firmly on with small-headed nails. Fig. 1 supplies an example, where the top, being supported upon a rustic leg supported by four equally rustic brackets, is formed of 1½-inch plank. Larch, Hazel, or other uniform-growing rods, are nailed on the surface, the smaller ends of the rods being always kept towards the center; and these may even be considerably reduced in breadth, and, in some cases, reach only half or third way toward the point of termination.



Fig. 1.

Amongst the furnishings of a GEOMETRICAL GARDEN are elevated borders or baskets of flowers, formed of low margins a foot or eighteen inches high. These are usually of polished stone, and often richly carved; and, as substitutes, very elegant ones of artificial stone, in AUSTIN'S and SEELEY'S manner, are employed. These are called porte-fleurs, and are placed on grass and sometimes on gravel, and of themselves form very attractive objects, more especially when filled with plants either planted out in them, or, if grown in pots, plunged in them, and the surface covered with moss.

Fig. 2 is one of elliptical form, seven feet by five feet, the cost of which was £30. They stand the weather well, particularly if painted once a year with boiled linseed oil, which prevents their absorbing moisture. Such subjects should stand properly on gravel; or, if on grass lawns, there should be a gravel walk around them to cut off the connection between them and the lawn.



Fig. 2.



## Foreign Notices.

MARANTAS. — Plants with variegated foliage are now in much esteem for decorative purposes, and well they deserve to be so, for many of them are exceedingly useful, being striking and interesting objects irrespective of their flowers; and hence their beauty is of a more enduring character than that of plants which have no particular beauty except while in bloom. Unfortunately, however, the flowers of most of our finest variegated plants are very uninteresting; but this is of little importance, as the beauty of their foliage will always render them attractive and useful for decorative purposes. Several varieties of Maranta deserve to be ranked among the finest of our variegated plants, being free growers, with large finely marked foliage, which is not so tender and liable to become disfigured by any little mismanagement as is the case with many of our variegated plants. Persons about to commence the culture of this genus, who can only accommodate a few varieties, should procure the red and white veined kinds, which are very beautiful; but *vittata* is my own favorite, and is probably the most useful variety of the genus. These are somewhat expensive at present, but there is no risk of losing them, hence there is no danger of having to purchase a second plant, as frequently happens with amateurs in the case of hardwooded plants. Young plants cannot be procured at a better season of the year than the present, for there will be no danger of injury on the journey while the weather is mild. When received, the plants should be placed in a close but not over warm house or pit, and kept rather dry for a few days until they get over any little injuries they may have received in travelling. Then examine the state of the roots, and give a moderate shift if necessary, using nice fibry peat with a small proportion of loam carefully broken up, and well intermixed with plenty of sharp sand and some lumpy bits of charcoal, to ensure the free percolation of water through the mass. Likewise have the pots well drained, for the Maranta requires a free supply of water while in active growth; but stagnant moisture about the roots is very injurious, spoiling the markings of the foliage as well as the general health of the plant. After potting, place the plants in a close warm pit or house, where they will not be exposed to bright sunshine, and water carefully at the root until they get hold of the fresh soil; but dew them overhead with the syringe every fine afternoon. If a brisk bottom-heat can be commanded, this will greatly assist in promoting active growth; but fine strong specimens will soon be obtained without it. When dull cloudy weather occurs it will probably be necessary to place the plants in a light rather airy part of the house, in order to prevent the foliage being injured by damp; but unless damp appears inclined to be troublesome, they may be allowed to remain in the warmest corner, and be kept growing on slowly. Syringing will of course be unnecessary in winter, except an occasional wipe on a fine morning, to clear the foliage of dust, &c.; and too much water must not be given to the soil. Attend to repotting in spring as early as may be necessary, giving moderate shifts, which are safer than large ones. If scale or insects of any kind attack the foliage, these must be carefully removed by means of a sponge and water, and this should be attended to before the foliage gets disfigured. By continuing this treatment for a season or two, fine large specimens will be obtained, and when this is the case they may be removed from the stove and placed in the conservatory, where, if they are afforded a close corner, and not over-watered or allowed to suffer from damp, they will be quite at home all the summer season. But they must be removed to where a temperature of not less than 55° is maintained as soon as cold damp weather sets in in autumn. Large specimens will of course require to be repotted occasionally, and this should be done as early in spring as there may be an opportunity of affording them a brisk temperature to stir the roots. With proper management, specimens will last for any number of years; and propagation is easily effected by dividing the old plants, or by means of offsets, which should be taken off with as many roots as possible, and kept close for a few weeks after potting, when they will be sufficiently rooted to be treated as established plants.—*Alpha in Gard. Chron.*

PROFITS OF PEAR GROWING IN ENGLAND.—Pear growing, it will be seen from the following extract, can not be an unprofitable culture in England, with all the defects of climate. If we were to go into some details in this way, in regard to profits of Pear trees here, we might make some statements that would surprise people :

"An observation of M. de Jonghe, in one of your late Numbers, to the effect that England, from mismanagement, is tributary to Belgium for Pears, induces me to remark the high price at which this fruit is retailed in Covent Garden. I have seldom been able to purchase first-rate winter fruit, such as Winter Nelis, Beurré Rance, Easter Beurré, or Ne plus Mouris, under 6*d.* a piece, and never under 4*d.* Now let us suppose an acre stocked with pyramidal trees, at six feet apart, there is room for 1210. In good condition, they surely ought to produce two dozen Pears each; but let us suppose that every other tree is absolutely barren every alternate year; the average will then be a dozen fruit per tree. Let us now assume that even of this dozen one-half is cracked, pecked, rotten, or otherwise unsaleable; there will remain half-a-dozen in good condition. Let us halve these again, and suppose that only three can be retailed at the full price of 6*d.*, and that the other three will only produce 4*d.* each. We have thus 2*s.* 6*d.*, per tree, or 152*d.* per acre. What the retailer's profit is I know not, but assuming him to be contented with 52 per cent., he will pay the grower 100*l.* Now 100*l.* an acre seems an enormous return, even after allowing that the trees, at 1*s.* 6*d.*, each, must originally have cost 90*l.*, and that annual expenses, such as rent, taxes, and labor, have to be deducted. Hence we may conclude, either that Pear-growers are driving a most lucrative trade, or else that amateurs must not, on an average of years, expect a return from their pyramidal trees of even six good fruit from each. The culture of standards is usually considered more profitable than pyramids. If so, market gardeners, who almost always plant standards, will actually realise larger profits than these I have indicated above. *S. B., Bromley, in Gard. Chron.*"

HELIOTROPES, owing to their agreeable fragrance and cheerful-looking flowers, are always especial favorites in the flower garden, and when successfully cultivated in pots they are very ornamental in a greenhouse. The only fault belonging to them as bedding plants is their being so tender as to be often destroyed by frost early in the season, while other occupants of the flower garden continue in perfection. Notwithstanding this, however, they must still be cultivated, both out-looks and in, more especially as the varieties have become so greatly improved of late, both in habit of growth and richness of color. *Voltaireanum nanum* is one of the very best, having high colored flowers, and a dwarf, compact habit, as have also *corymbosum* and *Sauvignier de Liège*; all these answer either for bedding or pot culture. Cuttings taken off early in August, and placed in an old Melon or Cucumber frame, in a mixture of leaf-mould, sand, and garden soil, root freely. They should, however, be inserted rather firmly in thoroughly well drained 6-inch pots, placing a portion of the rough siftings of the soil over the crocks, to keep the mould from being washed down among them. Many complaints have at different times been made with respect to their damping off. No doubt, if taken off too late in the autumn, or put in badly drained pots, this may happen; but if put in early in August, or early in spring, not one in a hundred will fail. As soon as they are sufficiently rooted, pot them singly into 3-inch pots, in a mixture of leaf-mould, loam, and sand, and replace them in the frame, keeping them rather close and shaded from the midday sun until they have become well established, frequently sprinkling them over-head with a fine rosed watering pot. When well rooted remove them to the most convenient place for wintering them in; and if other accommodation cannot be afforded, they may remain in their cutting pots until spring. Their heads should frequently be pinched out to keep them bushy; for those who have but little convenience for housing bedding plants will find it best to keep a few old plants in pots, and by placing them in a little bottom heat, about the end of February, they will produce abundance of cuttings, which will strike freely if placed in a single bottom-heat. Care should be taken to harden them off well before they are too fully exposed to the open air, and as a rule they should always be the last plants bedded out. A plant or two should also be turned out in the borders of the conservatory, or in some corner of the greenhouse, to furnish flowers for bouquets. As a pot plant the Heliotrope is valu-



able both for its fragrance and color, and under good management the above named varieties will form handsome specimens. Young plants for this purpose should be started in a moist gentle heat about March, and liberally shifted into thoroughly drained pots, when found necessary, frequently pinching off the ends of the shoots, to keep them dwarf and compact. The lower shoots should be tied down to the edge of the pots, and the remainder should be neatly regulated. The plants should then be moved to a cool and more airy situation, and the syringe should be freely used in fine weather, and they should also be liberally supplied with water during the summer months, by which time they will form large handsome specimens, and should be placed in the greenhouse, where they will remain a long time in perfection. Manure water should be given freely during the blooming season.—*E. B., Gard. Chron.*

NATIONAL FLORICULTURAL SOCIETY, SEPTEMBER 7.—Several seedling Dahlias were produced; Mr. Dodds, of Salisbury, had Miss Herbert, bronzy pink, with light tip; Lord Raglan, a flower like Sir John Franklin, but lighter; and Mrs. Stowe, bright lilac pink, to which a certificate of Merit was awarded. Mr. Wheeler sent blooms of Lord Bath, a deep maroon, good in form and substance, and Primrose Peerless, a promising flower. Mr. Keynes sent Ruby Queen, a well formed medium sized flower, to which a first-class certificate was awarded; Comet, plate yellow, and pink, slightly striped with crimson, which received a certificate of merit; and Lady Folkeston, yellowish buff tipped with bright rosy purple, which also received a certificate of merit. Mr. Rawlings sent Miss Frampton, deep red ground with shaded white tip, good form and substance, and well deserving the first-class certificate which was awarded to it. Mr. Pope, of Pimlico, exhibited Omer Pacha, scarlet, and Mrs. Howard, light yellow, shaded and tipped with deep salmon; a certificate of merit was awarded to the latter variety. A few good seedling Hollyhocks came from Mr. Parsons, of Welwyn, but as single blooms only of each variety were shown the judges could not give any awards. Messrs. Dobson and Son sent a dwarf white Phlox, called *Omniflora compacta*, to which a certificate of merit was awarded; and blooms of a seedling light-colored Verbena, called *Fragrans*. Mr. Cole, of St. Alban's, exhibited cut blooms of his very pretty pure white bedding *Calceolaria*, *Purity*, a variety that should be extensively grown for bedding purposes. Mr. Rawlings also exhibited his seedling Dahlias, Dr. Reid, dark purple, and Mr. Critchett, deep scarlet.

September 21.—Dahlias were again exhibited in considerable numbers. The Rev. C. Fellows, of Shottisham Rectory, near Norwich, sent eight varieties, consisting of Cossack, a brilliant carmine, full sized flower, with close, well-formed centre; the Nigger, which is perhaps the darkest flower grown, being nearly black, and smaller in the petal than Essex Triumph. Three blooms of each of the above two varieties were shown, and both had certificates awarded them. Mr. Fellows also sent 12 blooms of his Pre-eminent, a large deep purple, and very constant, but not in a condition to receive any award. The other five were—Tasso, dark shaded puce, rather small, but fine in petal and form; Portrait, a light orange scarlet; Harbinger, an improved Shylock, a very deep flower; Agincourt, bright purple, and very promising; and Glenlyon and General Washington; the two latter not good. Mr. C. J. Perry, of Birmingham, was awarded a first class certificate for his seedling fancy Dahlia, Baron Alderson, orange, tipped with white, Mr. J. S. Prockter, of Bermodsey, sent three varieties—Fanny Russell, Empress, and Miss Russell. The first named is a pretty fancy flower, of good shape and medium size, salmon buff, tipped with pale flesh color; this is a neat, smooth flower, and had a certificate awarded to it. Empress is a pretty light kind, something like Annie Salter. Miss Russell, lilac, is all that can be desired in form, but has a loose imperfect centre, the petal standing upright instead of incurving. Lollipop, exhibited by G. Holmes, Esq., is a large reflexed flower, with a high centre; the outline is very good, being nearly half a globe, of a curious pinkish buff color. Three blooms were exhibited, and a certificate was awarded to it, although a seedling of 1854. A first class certificate was awarded to Mr. C. Turner, of Slough, for Espartero, a flower of great substance, smooth, and of good form; the centre is close and high; the petals small, close, and well-arranged, nine blooms of this variety were exhibited. Dr. Reed, a dark maroon Dahlia, was exhibited by Mr. Rawlings, and has some good points, but as exhibited there was not enough of it. There were also nine blooms of Holmes' Ringleader, exhibited in excellent condition. Mr. Holmes sent twelve blooms



of named varieties, in which we noticed a fine bloom of Sir John Franklin, which, when large, is without an equal in form; this bloom was deservedly admired. Of other subjects, the most interesting were some varieties of *Phlox Drummondii*, exhibited by Mr. Cole, two of which were large and very round, with distinct white eyes. The same exhibitor sent out blooms of shrubby *Calceolarias*, amongst which we noticed Prince of Orange, a good bedding variety, of dwarf habit, small, with compact heads of flower, and of rather a novel color—yellowish brown.—*Groenland's Chronicle*.

**JAPAN LILIES.**—The following remarks on the treatment of this magnificent family of Lilies, apply in this country just the same as in England. We have been delighted with their superb flowering the past dry autumn, in the open ground. The largest and finest bed we have ever seen was in the grounds of Messrs. Hovey & Co., of Boston, in September last. Mr. Hovey seemed to believe that he had actually produced a cross between them and the Tiger Lily; but we saw no evidence of the fact, to satisfy us that this was so. We do not say that it is impossible, but we believe it has not yet been done. The Japan Lilies from seed vary much in foliage and flowers:

"Few plants are more useful than the different varieties of Japan Lilies. They come into bloom at a time when our New Holland plants are over, and when an actual paucity of flowering plants exists, wherewith to decorate the conservatory and greenhouse; and what really can be more suitable? They produce a gorgeous display either in-doors or out; and as they are quite hardy they may be liberally planted in the open borders; they thus constitute one of our best autumnal flower garden plants. Their propagation is simple and certain. The bulbs may be separated, and each scale will eventually form a new bulb. This separation should be effected when the flower stems are withered; the scales should be stuck into pans of silver sand, and placed in a cold frame or pit. After remaining one season in this position, they should be planted in a prepared bed of peat soil, and a little silver sand intermixed with it; thus treated the bulbs will soon grow large enough to flower. The cultivation of them in pots is by no means difficult. Immediately when the bulbs go to rest in the autumn is the proper time to repot them. By no means destroy the old roots, but carefully place them amongst the fresh soil. If large examples for particular display are required, large pots may be employed, and half a dozen large flowering bulbs placed in each pot. The soil I use is rough peat. The pots should be well drained, and the crowns of the bulb just covered with the soil; when potted they should be placed in a cold pit or frame, in order to prevent the soil from freezing, although frost will not injure the bulbs. Where room under glass is an object in winter, they may be plunged in the open air in coal ashes, in a manner similar to potted Hyacinths. I have at this time a large number in flower, which have never been under glass until within these few days; they have sustained no injury from exposure. There is scarcely any plant which is so much benefited by liquid manure as the Lily, more especially before expanding its flowers. If used in a clear state, and considerably diluted, this water alone may be applied for at least a month before it comes into flower. If the object should be out-door cultivation entirely, I should recommend them to be planted in beds; their effect is exceedingly grand. Excavate the soil 18 inches deep, and fill in the bottom a foot deep with very coarse peat, intermixed with one-fifth of decayed manure or leaf-mould. The remaining six inches may be entirely peat. If the bulbs are large enough to bloom, plant them twelve inches apart every way, and if beds of each kind are well contrasted one with the other the effect will be magnificent." *S. in Gard. Chron.*

## Editor's Table.

§ TRAINING GRAPES HORIZONTALLY NEAR THE GROUND.—We have received from S. OSCAR CROSS, of Sandy Hill, Washington County, N. Y., a drawing and description of a patent "Adjustable and Elevating Grape Frame," which we think may prove to be a valuable contrivance. It would for one thing facilitate the protection of vines that require it, during the winter season; besides, and which is of greater importance, *Mildew*, the great enemy of the Grape in Europe and of all foreign Grapes in the open air in this country, may, it is thought by many cultivators and experimentalists, be prevented by horizontal training. How far this may prove true on a more extended trial, we cannot say, but we find, just at this moment, an article on this subject in the *Gardeners' Chronicle*, of October, by Prof BERKLEY, one of the most learned and reliable of modern writers on vegetable physiology. He, it will be seen, has adopted the opinion that it is not the influence of contact with the soil, but the mode of training which produces the results. Why may it not be both?

A notice was published in our volume for 1853, p. 740, respecting M. ROBAM's report to the French Academy of the benefit of bringing vine-branches down to the ground, and we then called the attention of our correspondent to the fact, which appeared from evidence then adduced, not dependent on the contact with the soil but upon the horizontal position; at the same time requesting information, provided any similar experience existed in this country. We have accordingly been favored with three letters on the subject by Mr. WILLIAM PRESTON, all tending to show that much benefit is to be derived from horizontal training. He has never had a mildewed leaf or fruit on those vines, some twenty in number, which he has trained horizontally, while the produce has been singularly good. In an adjoining house, however, in which the more ordinary mode of training was adopted, the vines have been severely attacked, and when the first evil had been subdued, the disease broke out a second time with equal virulence.

It is not difficult to explain the increased fruitfulness arising from this method of training, which delays the descent of returning sap, to the presence of which, in an unusually concentrated form, the production of fruit is principally due, as is proved by the process of ringing; while the liability of Plums and Apricots to gum, whose branches are trained in a perfectly horizontal direction, depends upon the same abnormal accumulation of sap. This, however, has no necessary connection with the production of the fungi, which, on the contrary, are generally the more prevalent in exact proportion to the luxuriant appearance of a crop. If, for instance, the leaves of a potato crop present a peculiarly rich green tint, it is almost sure to suffer from mildew, and an attentive search will most probably detect unequivocal signs of the evil, while a crop with a yellowish and apparently sickly appearance will entirely escape. It does not, however, follow that the habits of every parasite should be the same; and inasmuch as it does really appear that vines in which the branches are horizontal do not suffer, or at least do not suffer so much from mildew, the horizontal method, though it would be unwise to expect any complete exemption from the practice, is well worth the cultivator's consideration, especially when it is considered that on the continent the vines, which are kept low, without any attempt at horizontal training, suffer far less than those which grow on trellises.

Mr. Cross will no doubt furnish cheerfully any desired information in regard to his patent frame.

EVERGREEN SHRUBS.—We have had chapter on chapter on evergreen trees, but very little attention has been paid to that highly important, ornamental and interesting class of *Shrubbery* which is so useful in ornamental winter gardening. I have a neighbor who planted very beautiful grounds for a summer residence. This year he remains during the winter; all his shrubbery, or very nearly all is deciduous, and more cheerless looking premises since the cold weather, it would be difficult to find. In England Evergreen Shrubs enact a most important part in the *pictures* which the landscape presents; here we have the whole subject to study as to what is handsome and *what is hardy*. I have myself made some progress in a collection of this description, but want more enlightenment, and I cannot suggest any subject that is likely to call out more valuable information in the *HORTICULTURIST*. If I have heard aright, Mr. SAUNDERS, of Germantown, Pennsylvania, and there is no better qualified instructor, is investigating this subject, and I invite him to give the results. *HORTICOLA*.

By all means let us hear what can be done in the way of Evergreen Shrubs, in our northern climate. Oh, for the Hollies, and Laurels, and Rhodendrons that flourish so gaily in England, and give such charms to the country landscape! Is it not possible for us to succeed with Hollies and Rhododendrons at least? A short time ago we were visiting some gardens at Astoria, and we passed by a magnificent Holly, as healthy and as happy looking as though it were standing in Regents Park. What can be done once can be done again, and the Holly must be tried more thoroughly. Mr. SAUNDERS, not long ago gave us a few good hints about the Kalmia, we hope to hear from him farther on Evergreen Shrubs.

COMSTOCK'S "TERRA-CULTURE."—At the Annual Meeting of the State Agricultural Society in 1851, the subject of COMSTOCK'S alleged discovery was brought before the Society, and the following Committee was appointed to confer with Mr. COMSTOCK as to what action it would be proper to take in the premises: JOEL B. NOTT, A. J. DOWNING, LEWIS F. ALLEN, E. P. PRENTICE, and HON. ANTHONY VAN BERGEN.

Mr. L. F. ALLEN, in the absence of the Chairman of the Committee, to whom was referred the claimed discoveries of RUSSELL COMSTOCK, of Dutchess Co., on vegetation, reported, after a conference with Mr. C., that the Committee came to the *unanimous opinion*, that *no new discovery* had been made by Mr. COMSTOCK, nor was his practice different from that of experienced nurserymen heretofore, and which may be found described in public works—and although important in themselves, the Committee do not deem it proper for the Society to recommend to the Legislature any appropriation to Mr. COMSTOCK as the discoverer.

This Report was adopted by the Society.

B. P. JOHNSON, Cor. Sec'y.

Since this Report Prof. Comstock has not been heard of much in this section of country. No loss.—ED.

A YOUNG NATURALIST.—FRANCES D. GAGE, whose name appears frequently in the *Ohio Cultivator*, writes to the *State Journal*, from the Illinois State Fair, at Springfield. "The first thing that attracted my attention was a suit of the animal and vegetable creation gathered by WM. H. SHAW. 100 species of wood. 1000 species of plants. 1500 insects of 700 species. All of two seasons gathering. He seemed very young, very enthusiastic, and full of energy. What a Bug-ologist he will be if he live three score years and ten."

THE INDEX, &c., occupies so much room in the present number, that we are compelled to defer several articles from correspondents, and much other matter. Hereafter we shall issue the *HORTICULTURIST* so early that our distant subscribers will receive it by about the *first of each month*. Our correspondents will therefore please send us their favors early.



POMOLOGICAL GOSSIP.—As I am confined to the house by a rainy day, and on taking up the *Horticulturist* saw your solicitation for rough notes, &c., thought aroused me to give a few, and to let them go for what they may seem worth.

*Peaches* have been very plentiful with us this summer. The two *Crawford* varieties were exceedingly fine. Some of the late *Crawford's* actually measured eleven inches in circumference, and, when well ripened, really luscious. I have esteemed the above two varieties as really splendid market fruit—so very valuable, that now I have two hundred trees of the *Crawfords* nicely in bearing on my grounds, along with all the other leading varieties of the present day, some of which far surpass the *Crawfords* in beauty and richness of flavor; yet for real profit I will give *Crawford's Early* the preference. Its hardiness and proof against the sudden changes of the weather, curled leaf, and late frosts, will soon place it at the head of all varieties for extensive cultivation. I will here state that your strawberry *McAvoy's Superior*, or fine prize with me proves to be the *Extra Red*, like Prince sent me from Long Island.

*Plums*.—I have had a full crop of all the leading kinds for the last eight years, such as the *Jefferson*, *Washington*, *G. Gage*, *Huling's Superb*, *Smith's Orleans*, *Lawrence's Favorite*, and so on; also, *Nectarines* and *Apricots*, all simply saved by jarring the trees and killing the curculios from the cotton sheet prepared for the purpose, as follows: The sheet always to be made sufficiently large to catch all that may fall on either side, to be cut up half way in the centre, and hemmed so as to pass around the trunk of the tree; then, with one long and two short sticks to be lashed fast to the ends, two boys and a man can run over a fruit garden in a few minutes, and will always have the satisfaction to find the curculios to lessen in numbers rapidly; and as soon as only one or two are caught, the sheet may be hung up till the next year. The reward will be certain and rich.

*Strawberries*.—*Hovey's Seedling*, *Burr's New Pine*, *Early Scarlet*, bear large and fine berries, and are heavily loaded every year. No failure so far. *Swainstone's Seedling*, *Ross's Phoenix*, *Keen's Seedling*, *Myatt's Eliza*, *Princess Royal*, *British Queen*, *Methven Scarlet*, are rather poor bearers, and will hardly pay for culture. But I must here remark that the *English Swainstone Seedling*, in my opinion, is the richest of all foreign imported varieties, and a tolerable good bearer in a deep rich soil, (having ripe fruit and blossoms at the same time,) berries large, conical, fine in flavor, far ahead of *Burr's New Pine* when well ripened. Try it and see, or try it again; it's the highest flavored berry of the day. *Black Prince* is with me an enormous bearer; large and good. I have taken it into the field for a market berry along with *McAvoy's Superior*, *Extra Red*, and *No. 1 pistillate*. These varieties of *McAvoy's* I obtained from Wm. R. Prince, Flushing, L. I., which he assured me were genuine; and I am pleased to know they are so. They bore the past season, and I must say are very important varieties. The *Superior* is decidedly the best berry of the three; yet the *Extra Red* is valuable as a market fruit, being large and quite prolific, yet it has a queer habit—some of its berries, when under high cultivation, grow in shape like a new moon, and many others do not fill up full, and occasionally show green in the end of the fruit, like the bursting out of a leaf; and this is the kind that has been sold to hundreds for *McAvoy's Superior*, by the descriptions in the *Horticulturist*, from different parts, which is good proof. Now I have some twenty of the leading varieties of Strawberry, and when planted in the garden, row for row, one row of the *Extra Red* will multiply and produce more plants perhaps than all the rest together; while the *Superior* multiplies but moderately, and somewhat resembles *Burr's New Pine* in foliage, lying closer to the ground than the *Extra Red*, and the leaves are not crimped like that variety. The *No. 1 pistillate* is an extraordinary large, fine fruit, but lacking in flavor, &c. I have also a recent variety brought from England, by a gentleman in Hamilton; it is called *Crawford's Superb Pistillate*, conical, large, and exceeding prolific; color dark mahogany, a very valuable variety, and a great and free grower. My seedlings from the *British Queen* make me smile; indeed, such foliage as some of the young plants have, is astonishing—far stronger than

the parent plant. Also, seedlings from *Swainstone's*, *Ross's Phoenix*, *Hovey's*, *Burr's New Pine*, *Black Prince*, *Scarlet Cone*, *Rival Hudson*, and so on; and this summer would have shown me the fruit of many, but owing to removal from the garden to the field, I shall have to wait till next summer, when they will be in great strength, as they have good soil, and have been kept clean, and all the runners kept clipped off. A few fruited, one of which looks very much like *Burr's New Pine*, of which it is a seedling; and, as far as I could judge from the first season, will be a full match for its parent, if not richer. I have let its runners strike. I shall mulch in the spring, and give it a fair trial. I am delighted in the Strawberry culture, and shall, as I have plenty of room, experiment largely. You shall hear from me occasionally.

I have four seedling peaches that are very good, and Mr. Hodge of Buffalo, saw one of them and pronounced it first rate. It was the *Cling*, which looks just like a large lemon in shape and color. WM. H. READ.—*Port Dalhousie, C. W.*

To ELSIE—Your proposed visit will be much prized. I see we at last understand somewhat of each other. ATTICUS.

At a meeting of the New York Horticultural Society, on 2d October last, Mr. WM. S. CARPENTER laid on the tables several specimens of a new seedling Peach, which gives decided promise of being an acquisition. It is very large—equal in size to *Crawford's Late* and *Early*. Some specimens were eleven inches in circumference. Flesh pure white to the stone; no red; and is juicy, sprightly, of good flavor, and a good bearer. Its large size, color, and lateness of ripening, will make it particularly desirable for preserving. Last year it did not ripen until the middle of October. This year, owing to the drouth, the Peach ripened two weeks earlier. The present is the second season of its bearing, and it seemed worthy of particular notice.

Mr. THOMAS HOGG, JR., Chairman of the Fruit Committee, reported favorably on Mr. CARPENTER'S Peach, naming it "*Carpenter's White*."—*Am. Agriculturist*.

### Answers to Correspondents.

PLEASE answer the following questions in the next *Horticulturist*, and you will much oblige, at least one of your subscribers, viz:

What are the names of the six best Verbenas—as for color, &c.?

What are the names of the six best Dahlias—as for color, habits, &c.?

What are the names of the six best Paeonies—as for color, habit, &c.?

How do you protect fall sown Lettuce?

Which is the nicest Rose; "*Blanche*," or, *Blanche Vibert*, (of the Remontants)? G. H. H.—*Collins Centre, N. Y.*

SIX BEST VERBENAS, (OLD OR NEW.) *Defiance*—light fiery scarlet. *St. Marguerite*—rosy crimson with a violet center. *America*—pure white. *Blue Bonnet*—deep blue. *Painted Lady*—clear white, with a carmine eye. *Madame Lemounier*—distinctly striped like a Carnation, rose and blush.

SIX BEST DAHLIAS. *Agnes*—pure white. *Grand Duke*—bluish lilac; a new color and beautiful form. *Sir R. Whittington*—ruby crimson. *Beauty of the Grove*—buff, edged with purple. *Claudia*—violet purple, tipped with white. *Mrs. Hansan*—yellow, tipped with white.

SIX BEST CHINESE PÆONIES. *Comte de Paris*—purplish rose; early. *Duchesse de Nemours*—violet and lilac. *Festiva*—pure white, center marked with red. *Humei*—purplish rose; late. *Potsi*—dark purplish crimson. *Queen Victoria*—rose and blush.

Protect fall sown Lettuce by a thick covering of dry leaves, laid on in a dry time. An old hot bed frame placed over them and covered with boards or straw mats would be better.

We do not know a Remontant Rose "*Blanche*." *Blanche Vibert* is a pretty white variety, but a very delicate grower.

I FIND my Apple seedlings much damaged by the wooly aphid. To me it is a new enemy, and threatens to be very formidable. I found a few on my two year old grafts, those I destroyed by crushing them. They injure the root by causing it to be covered with knots. Can you, or any of your correspondents give any information with regard to it—any preventives or remedies? It is not confined to this locality; I have seen them in great numbers in other nurseries. Enclosed I send you a piece of seedling root with the knots on it caused by them. W. H. O.—*Penn Yan.*

We have seldom seen the roots of healthy, vigorous, Apple trees, attacked with this insect, but seedlings allowed to remain in the seed beds until they become stunted, very often are, and so are the roots of large trees in some unfavorable situations. The past dry season has favored the appearance of this insect we believe. Seedlings badly affected should be destroyed, the roots of older trees should be stripped and cleaned with a brush. Will some one give more information?

I SEND you by Express a small box of Apples. What are they? I have not been able to identify them by any of the descriptions of Fruits in any book that I have seen. I have been disseminating to some extent in this part of the country, as Sweet Non-such, they are a favorite here.

The small Apple was received from PRINCE, & Co. a few years since, for the King of Pippins. Is it not Bullock's Pippin? Let me hear from you through the *Horticulturist*. JOHN RICHARD.—*Arch Spring, Md.*

*Ribston Pippins*, and fine specimens.

### Horticultural Societies, &c.

HORTICULTURAL DEPARTMENT NEW YORK STATE FAIR.—The following are the Premiums on Fruit and Flowers, awarded at the N. Y. State Fair. We are indebted to the Secretary for a correct list.

**FLOWERS.**—PROFESSIONAL LIST.—John Hewitt, gardener to Alfred Bridgeman, Astoria, best display of cut flowers, Silver Cup, value \$10; J. W. Wood, Washington Heights, second best, Silver Medal.

*Dahlias*.—M. Donadi, Astoria, L. I., best collection, \$6; John Hewitt, gardener to Alfred Bridgeman, Astoria, second best, \$3. M. Donadi, best 24 dissimilar blooms, 1st premium, \$5; John Hewitt, gardener to A. Bridgeman, second premium, \$3. J. W. Wood, Washington Heights, best 12 dissimilar blooms, \$3. James Weir, Bay Ridge, L. I., best American Seedling not before exhibited, Silver Medal.

*Roses*.—D. Boll, New York, greatest number of newest varieties, \$8; M. Donadi, Astoria, L. I., second greatest number of newest varieties, \$3. M. Donadi, newest and best 24 distinct varieties, with names, \$5. M. Donadi, newest and best 12 varieties, with names, \$3; James Weir, Bay Ridge, L. I., second best, \$2.

*Phloxes*.—D. Boll, New York, greatest number of newest and best varieties, \$5.

*Verbenas*.—John Dingwall, Albany, N. Y., greatest number of newest and best varieties, \$5.

*German Asters*.—Michael McGuinness, Staten Island, best collection, Silver Medal.

*Discretionary*.—W. A. Burgess, Glenwood Nursery, L. I., four new dahlias, \$5, do. one seedling dahlia, \$5. A. Sholtz, Mott Haven, seedling petunia "Harmonia," Dip. John Hewitt, Astoria, beautiful basket bouquet, Flower Garden Directory.

**FLOWERS.**—AMATEUR LIST.—Samuel Munn, Mott Haven, Westchester Co., best display cut flowers, Silver Medal; Mrs. William Newcomb, Pittstown, Rensselaer Co., second best, \$2.

*Dahlias*.—John Noble, gardener to George W. Thatcher, Sunny Side Place, Westchester Co., greatest number of newest and best varieties, \$5; James Weir, Bay Ridge, L. I., second best, \$3. James Weir, best 12 dissimilar blooms, with names, \$3.

*Roses*.—James Weir, Bay Ridge, L. I., best 12 varieties, with names, Silver Med.

*Verbenas*.—Mrs. James T. Van Namee, Pittstown, Rensselaer Co., greatest number of newest and best varieties, \$5; Mrs. William Newcomb, Pittstown, Rensselaer Co., second best, \$3. James Weir, Bay Ridge, L. I., best 12 distinct varieties, with names, \$3; Mrs. James T. Van Namee, Pittstown, Rensselaer Co., second best, \$2. Mrs. James T. Van Namee, Pittstown, Rensselaer Co., best 6 varieties, \$2; Adolph Sholtz, gardener to Samuel Munn, Mott Haven, Westchester Co., second best, \$1.

*Phloxes*.—Mrs. William Newcomb, greatest number of best and newest varieties, \$4, do. best seedling, \$1.

*German Asters*.—Mrs. William Newcomb, best collection, \$3; Mrs. J. T. Van Namee, second best, \$2.

*Pansies*.—Mrs. William Newcomb, best collection, \$3; Mrs. James T. Van Namee, second best, \$2.

GENERAL LIST.—A. P. Cummings, Williamsburgh, best collection of house plants in pots, 20 different specimens, Silver Cup, value \$10; Samuel Munn, Mott Haven, second best, \$5. Thomas Hogg & Son, Yorkville, best 10 plants in pots, different varieties, \$5; John Hewitt, gardener to Alfred Bridgeman, Astoria, second best, \$3.

*Floral Design or Ornament*.—H. A. Graef, Brooklyn, best, \$10; Mrs. Jas. T. Van Namee, second best, \$3.

*Bouquets*.—W. & J. Parke, Brooklyn, best pair hand, \$5; William Reid, 867 Broadway, N. Y., second best, \$3. Jas. Weir, Bay Ridge, N. Y., best pair parlor, \$6; W. & J. Parke, Brooklyn, second best, \$4.



**FRUIT.—PROFESSIONAL LIST.**—*Apples*.—J. W. Bailey, Plattsburgh, greatest number of good varieties and specimens, Silver Cup, value \$15. A. Frost & Co., Rochester, N. Y., best 20 varieties and best grown, 3 specimens each, \$10; Norman Crittenden, Ithaca, N. Y., second best, \$5.

*Pears*.—Ellwanger & Barry, Rochester, greatest number of good varieties and best specimens, Silver Cup, value, \$15. Ellwanger & Barry, best 20 varieties, best specimens, 3 of each, Silver Plate, value \$10; A. Frost, Rochester, second best, \$5. Ellwanger & Barry, best 12 varieties and best specimens, 6 of each, \$8. Ellwanger & Barry, best six varieties and best specimens, \$5; Norman Crittenden, Ithaca, N. Y., second best, \$3.

*Quinces*.—Norman Crittenden, Ithaca, best 12, \$3; A. Frost & Co., Rochester, second best, \$2.

*Peaches*.—John R. Wolsey, New York, best variety, 12 specimens, \$2.

*Plums*.—Ellwanger & Barry, Rochester, N. Y., greatest number of varieties, and best grown specimens, \$5.

*Grapes*.—R. T. Underhill, Croton Point, N. Y., greatest number of good native varieties and best grown specimens, \$5; W. A. Underhill, second best, \$3. James Aitkin, Poughkeepsie, best one variety, \$2. T. W. Ludlow, Jr., Yonkers, N. Y., greatest number of varieties, and best specimens of foreign, grown under glass, \$10. T. W. Ludlow, Jr., best one variety, \$3.

*Watermelons*.—John Hope, Crugers Island, greatest number of varieties, and best specimens, \$2.

**AMATEUR LIST.**—*Apples*.—N. & E. S. Hayward, Brighton, greatest number of good varieties, and best specimens, Silver Cup, value, \$15. N. & E. S. Hayward, best twenty varieties, and best grown, plate \$10; A. Fitch, New Salem, second best grown, \$5. Job T. Whipple, Greenwich, seedling Apple, "Strawberry," Elliott's Fruit Book. James O. Miller, jr., Montgomery, "Miller's Seedling," Elliott. E. R. Jones, Burnt Hill, "Jones' seedling Apple," Dip.

*Pears*.—Elisha Dorr, Albany, best six varieties, best specimens, \$5. Kirtland & McCulloch, Greenbush, best specimens of Virgalien and Seckel Pears, Elliott's Fruit Book. W. F. Ingalls, Volney, Pears, Downing.

*Peaches*.—H. G. Dickinson, Lyons, greatest number of varieties and best grown specimens correctly named, Silver plate, \$5; E. Sherman, Crawford, second best, \$3. H. G. Dickinson, best one variety, 12 specimens, \$2.

*Plums*.—Elisha Dorr, Albany, greatest number of varieties, and best grown specimens, plate, value \$5. Elisha Dorr, best six varieties, six specimens each, plate, value, \$3. Elisha Dorr, best single variety, 12 specimens, \$2.

*Grapes*.—Theodore Fowler, East Fishkill, greatest number of good native varieties, and best grown specimens, \$5; Isaac Merritt, Harts Village, second best, \$3. Isaac Merritt, best single variety, \$2.

**Discretionary.**—A. P. Cummings, Williamsburgh, L. I., figs, Trans. Elisha Dorr, Albany, Wax Plum, a seedling, worthy of cultivation, Dip. and Trans. W. S. Carpenter, Rye, seedling Peach, "Carpenter's White," Trans. Dr. C. W. Grant, Iona, best ripened Catawba Grape, Trans. Isaac Merritt, Harts Village, best cluster Grape, foreign variety, Trans. Institute. Michael McGuinness, Factoryville, Staten Island, Gooseberries of remarkable size, Buist's Flower Garden. James Beebe & Co., 356 Broadway, N. Y., a display of beautiful bronze statuary and vases, Dip. and Silver Medal. William Hunter, for a display of fine wooden tubs, for plants, \$3. Palmer & Longking, 142 Chatham st., N. Y., for fine ornamental flower stands, \$3. William A. Underhill, Croton Point, for superior Catawba Grapes, the best exhibited, but unfortunately not seen by the judges, Silver Medal.

**FOREIGN FRUIT.**—*Pears*.—Hovey & Co., Boston, Mass., for the greatest number of good varieties, and best specimens correctly named, two of each variety, Silver Cup, value, \$15. Hovey & Co., best twenty varieties, best specimens, three of each, Silver plate, value, \$10.

*Grapes*.—E. W. Bull, by Hovey & Co., Boston, Mass., best variety of good native Grapes, six bunches Concord Grape, \$2. James Potter, Princeton, N. J., best specimens and greatest number of varieties of foreign Grapes, grown under glass, six bunches of each, \$10. James Potter, by James Kane gardener, best single variety under glass, Black Hamburg, \$3.

*Apples*.—L. S. Pennington, Whiteside Co., Ill., greatest number of good varieties, and best specimens, at least three of each, Silver Cup, value, \$15. L. S. Pennington, Ill., best 20 varieties, best grown and correctly named, \$10.

**Special.**—W. Antrobus Holwell, Quebec, C. W., Fruit gatherer, Silver Medal.



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